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ABSTRACT

This document is filled with suggestions for inexpensive teacher-made classroom aids that can be used for concept reinforcement with the total class, a small group, or individual students. The games and teaching aids provided, allow instructors to provide the motivational drill to develop speed and accuracy for basic computational skills. The material is divided into the following major areas: Sets; Numbers-Numeration; Computation-Whole Numbers; Fractions-Decimals; Geometry; Measurement; Laboratory; Universal; and Step-A-Set Games. Several of these areas are further subdivided into more precise specifications. All games and teaching aids are alphabetically listed within each subdivision, if applicable, or within the major area heading. It is felt each listed game can be adapted to reinforce different concepts through merely changing the game board problem cards.

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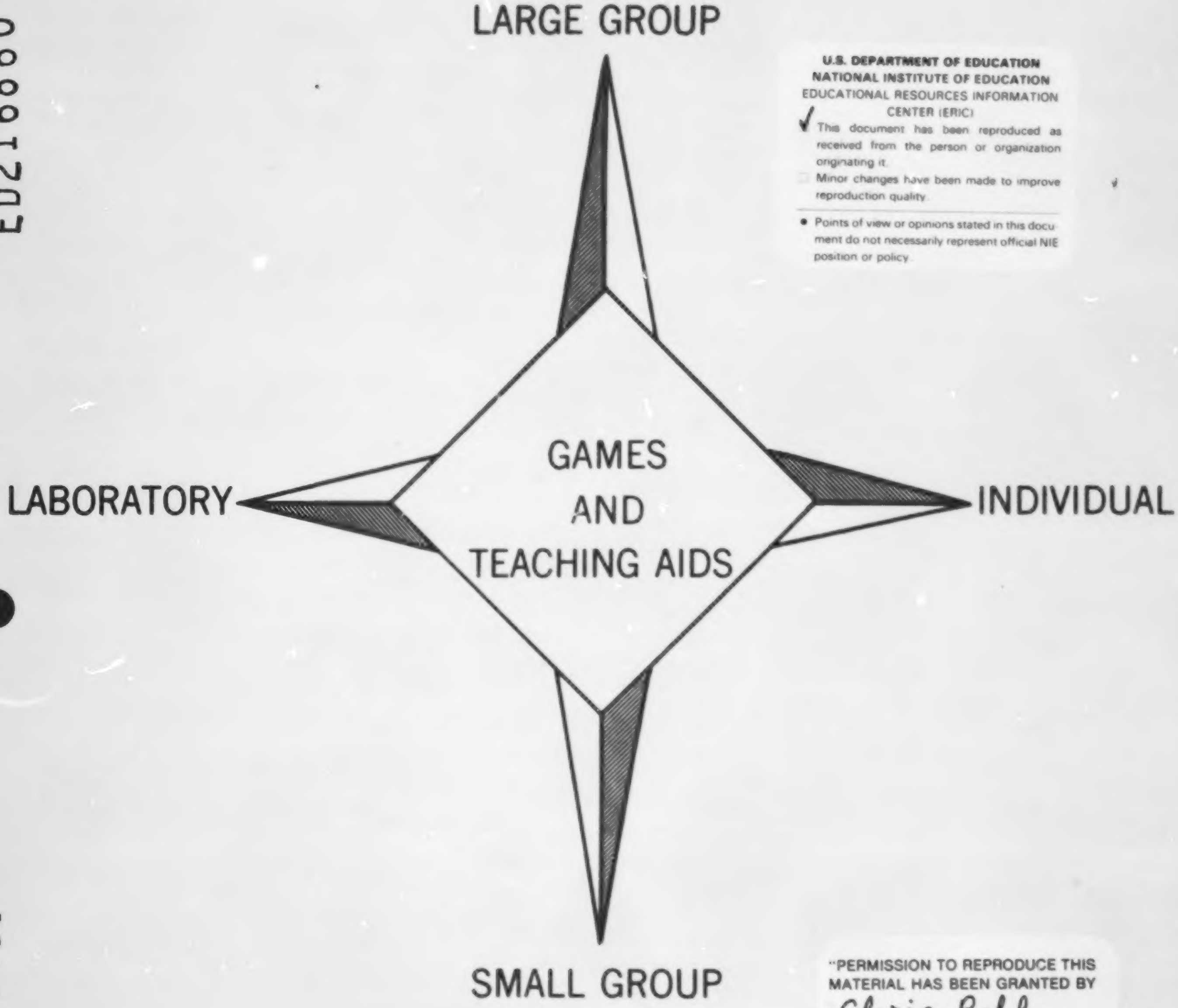
GAMES AND TEACHING AIDS



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Mathematics Department

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GAMES AND TEACHING AIDS

CURRICULUM SERVICES DIVISION

Wichita Public Schools
Educational Services Building
640 North Emporia
Wichita, Kansas 67214

Revised - Summer 1979

Dear Teacher:

This book is filled with suggestions for inexpensive teacher-made classroom aids that can be used for concept reinforcement with the total class, a small group, or individual students. The following people in Wichita have contributed to this collection of teaching ideas: mathematics coordinator, mathematics instructional specialists, classroom teachers, and mathematics instructional paraprofessionals. The games and teaching aids in this book will allow you the opportunity to provide the motivational drill that is necessary in developing speed and accuracy for the basic computational skills.

The games and teaching aids are listed by name in alphabetical order according to various math concepts for your convenience.

Each game can be adapted to reinforce different concepts by merely changing the game board problem cards.

Let's make learning mathematics fun!

Ed Schroeder
Mathematics Coordinator
Wichita Public Schools

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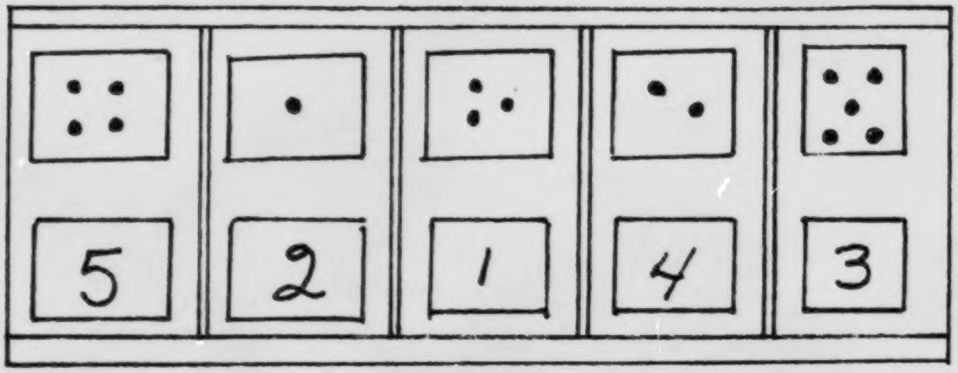
Sets

BOUNCE - BALLGAME

Materials:
2 pieces tagboard 20" x 27"
1 piece clear or plain colored oil cloth 36" x 54"
water base magic marker
Ball - 12" or 14" diameter

Procedure: Make six sections on each side by writing across board at nine inch intervals. Mark sets on one side of gameboard, numerals on opposite side.

Instructions: Place gameboard on floor. One child stands on each side. Child on numeral side calls numeral and bounces ball on that numeral. Other child catches ball and must bounce it back on matching set. Game may be played in teams, letting first two children be from team A, next two children to play will be from team B. Points may be scored for catching ball and for getting numeral and set correct.



BUTTON KIT

Materials:

box for storage
variety of buttons
small meat trays

Instructions:

1. Give a child the box of buttons.
2. Require the child to sort the buttons on the meat tray according to some physical property (color, size, texture, shape, number of holes, etc.).
3. Ask the child to count the number of buttons in each of the sets and write this number down on paper. Find out how many buttons in all the sets.
4. First grade or second grade students should then write a number sentence to represent what has happened. (i.e., subgroup + subgroup + subgroup = total.)
5. Repeat with sorting according to a different property.

CAGE THE BEAR

Materials: 1-20 berry baskets
teddy bear counters

Procedure: Turn baskets upside down, tape number cards with numbers 1-20 on top of basket.

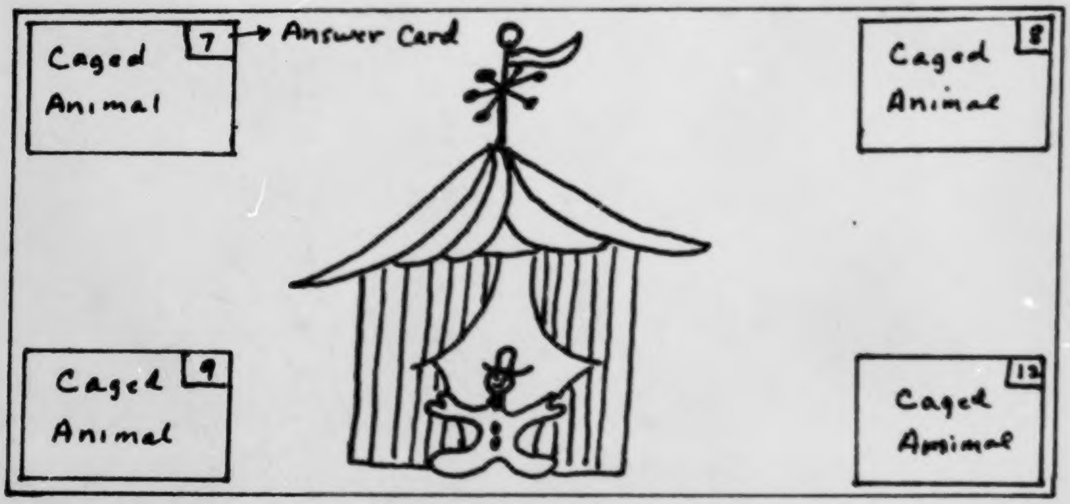
Instructions: Children cage as many bears as indicated by number on each basket.

CIRCUS CAGES

Materials: 22" x 28" cardboard
4-8 library pockets for cages
Deck of problem cards
Deck of answer cards

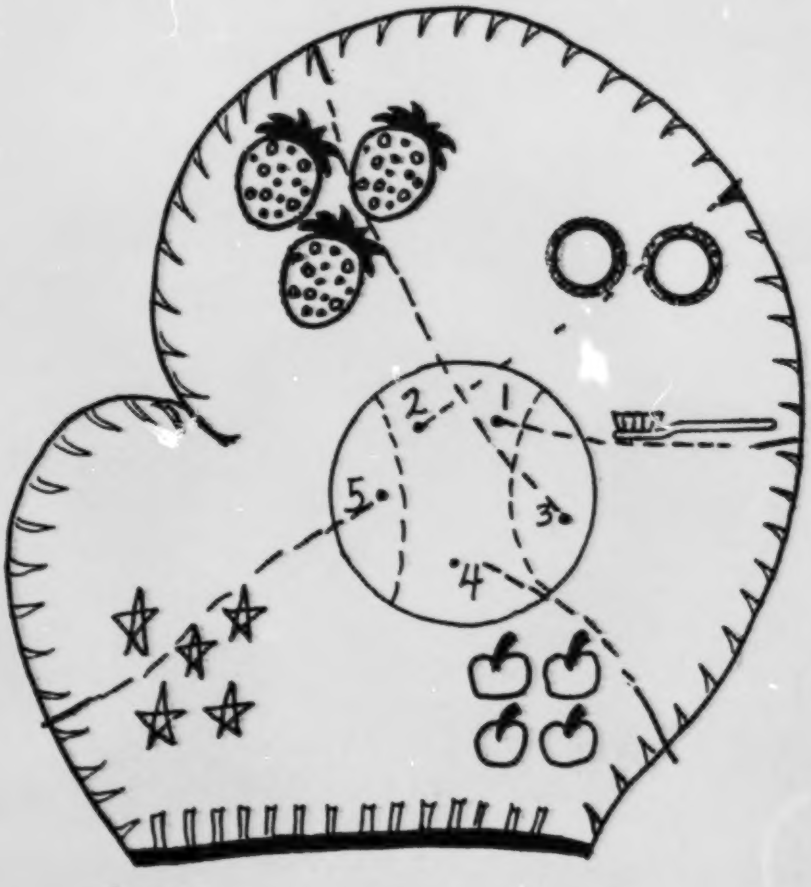
Procedure: Draw a circus tent in the center of board. Attach library pockets around the tent. Attach an answer card to each "cage."

Instructions: Each pupil draws a card from the problem cards. He then places the card in the correct answer cage (i.e. all problems whose answers are 7 in the 7 cage, etc. or the numeral 5 in the ⁙ cage, etc.) If more than one student plays, a tally sheet for each correct placement should be kept. The student with the most tallies is the winner.



CATCH A NUMBER

Materials:	railroad board small pictures yarn Elmers Glue
Procedure:	Cut out mitt from railroad board. Cut out a baseball. Place numerals randomly on the ball, and glue the baseball to the center of the mitt. Glue small pictures in correct set configurations on mitt. Beside each set of pictures cut a 1/2 inch slit in the mitt. Punch one hole beside each numeral in the baseball. Cut 5 pieces of yarn, knot one end of each piece, turn the mitt over, and insert the yarn through the back side of the mitt next to each numeral. Knot should be on the backside of the mitt. Place a dab of glue over each yarn knot so that it will affix itself and not slide in and out of the mitt.
Instructions:	The student will pick up the yarn beside each numeral, match the numeral to its corresponding set, and slide the yarn through the 1/2 inch slot beside the correct set configuration.



CONSERVATION BOARD

Materials:

1 - margarine tub
2 - 14" tubes (large enough for beads to pass through)
1 - 4" tube (fluorescent light packing material)
1 - 14" x 24" piece of styrofoam or cardboard

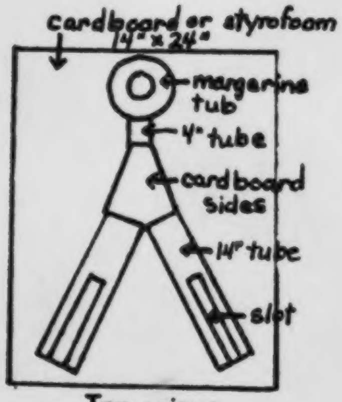
Procedure:

A hole large enough for the beads to pass through is cut in the margarine tub.

A thin, rectangular section is cut from the lower half of the 14" tubes. The pieces are put together as shown in the following illustration.

Instructions:

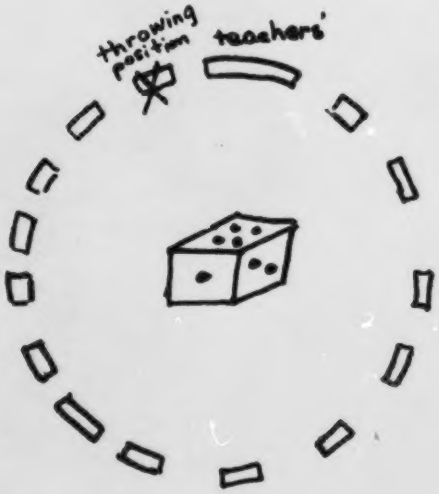
1. A set of beads is placed in the margarine tub. The board is tilted so it will make a 45 degree angle with the horizon. This will cause the beads to travel through the opening in the tub, through the 4" tube, and into one of the two 14" slotted tubes.
2. The child identifies the number of beads in each tube, and the number with which he started in the tub.
3. The board is tilted in the opposite direction to allow the beads to return to the tub. The above procedure is repeated.
4. If the procedure is repeated enough times, all the combinations of two sets will be identified (for the given set).



Top view

CRAZY CUBE

Materials:	large square box, approximately 12" square paper (to cover the box to make a cube) black magic marker
Directions:	Mark each face of a cube with sets. Have each child place his chair in a circle and sit on it. The teacher also places her chair in the circle. The child in the chair to the right of the teacher throws the cube into the middle of the circle. If the child identifies the set on the cube correctly, he gets to sit on the teacher's chair. Everyone else, including the teacher, moves one chair to the left. If the child does not identify the set correctly, he must move past the teacher's chair and sit on the next one. Everyone moves one chair to the right except the one sitting on the teacher's chair.
Object:	To be able to sit on the teacher's chair.
Purpose:	To help children recognize sets in a fun way.



DOMINO FLASH CARDS

Materials: tagboard 5" x 18"
magic markers

Procedure:

1. Fold each end of tagboard to the center to make two flaps.

2. Using a magic marker, place the set configurations shown below on each side of the domino. See the example below.

3. Continue with sets as follows:

1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9

2,2
2,3
2,4
2,5
2,6
2,7
2,8
2,9

3,3
3,4
3,5
3,6
3,7
3,8
3,9

4,4
4,5
4,6
4,7
4,8
4,9

5,5
5,6
5,7
5,8
5,9

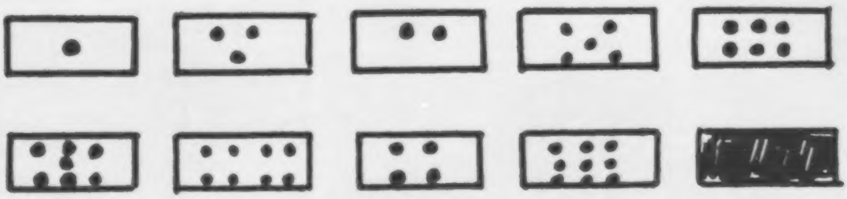
0,1
0,1
0,2
0,3
0,4
0,5
0,6

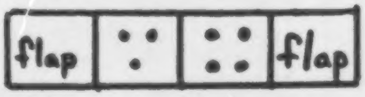
0,7
0,8
0,9

Use sets to represent all the addition fact combinations for 2nd grade; combinations with sums up to 10 for first grade; and sums up to 5 and 6 for kindergarten children.

Instructions: Fold out one flap--"How many dots do you see?" Fold out the other flap--"How many dots do you see here?" Fold out both flaps--"How many dots do you see all together?"

To reinforce subtraction--Show all the dots of the card to the students and then cover one of the sets with a flap--"Now how many are left?"





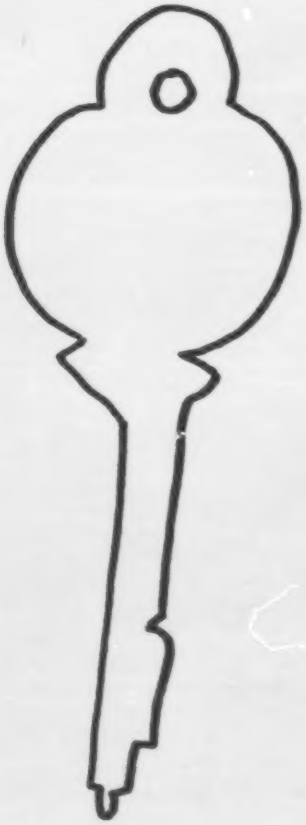
example

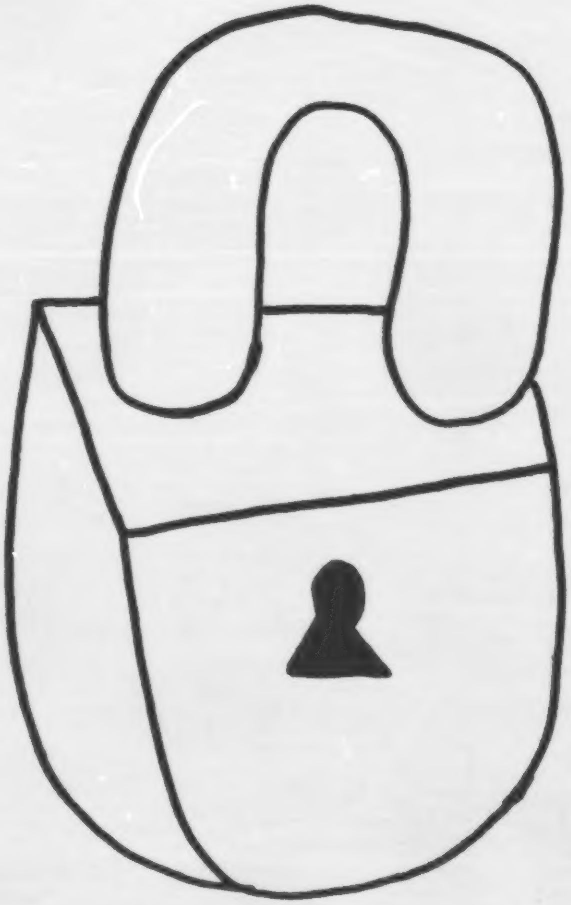
LOCKS AND KEYS

Materials:
- Ten locks
- Ten keys
- Cardstock
- Magic markers
- Gummed circles
- Glue

Procedure: Color in the locks and keys. Place gummed circles in set configuration on the locks; write numerals on keys. Glue onto cardstock.

Instructions: Students are given keys and they must match them to correct locks.

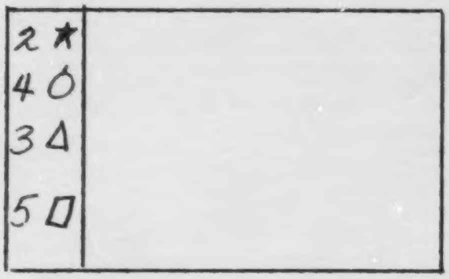




MAKE-A-SET

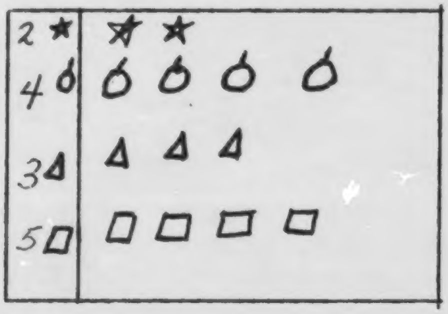
Materials:
12" x 20" piece of tagboard
various felt objects
magic markers

Procedure: On the left hand side of the board, write a numeral to represent how many of the felt objects the child is to select. Using a felt object as a pattern, draw the object next to the numeral. Draw a line to separate the numeral and object from the rest of the board. (See illustration below.)

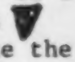


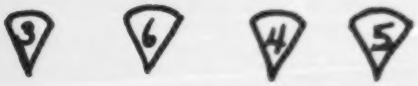
INSTRUCTIONS FOR MAKE-A-SET

1. The child is given a board and a box of felt objects.
2. The child must place to the right of the line the correct number of the objects. (See illustration below.)

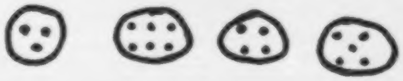


MATCH ICE CREAM CONE

Materials:	Tagboard or felt, magic marker
Procedure:	Cut out 24 ice cream cones and 24 scoop of ice cream from the tagboard. Label the cones with the numerals 1-9. Label the scoops of ice cream with set configurations to match the numerals on the cones. Attach the cones to some form of backing (tagboard or cardboard).
Instructions:	Give each student an equal number of scoops of ice cream. Expose the board containing the cones to all the students. Each student places his scoops of ice cream on the top of the appropriate ice cream cones. (e.g., would go on  etc.) The object of the contest is to see who can make the most correct matches.



Cones

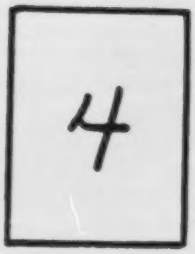


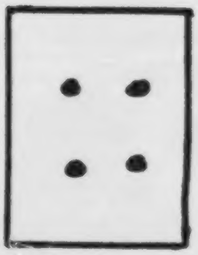
Scoops of ice cream

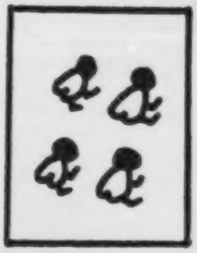
Note!	It is possible to adapt the ice cream cone game to all concepts that have a question-answer type format.

MATCH THREE

Materials:	30 - 3" x 5" cards (or 45, or 60) Variety of pictures showing groups of objects from 1-10
Procedure:	Make matching groups of three cards. Each group should contain a numeral card, configuration card and a picture card for the same number. See the illustration below.
Instructions:	Deal all the cards to the students. Each player should prepare books of all the groups of matching three cards that he has in his hand. Each pupil should then draw from the player to the left of him. The play continues around the table until one pupil has "booked" all his cards. The pupil should lay his "books" face up in front of him on the table.

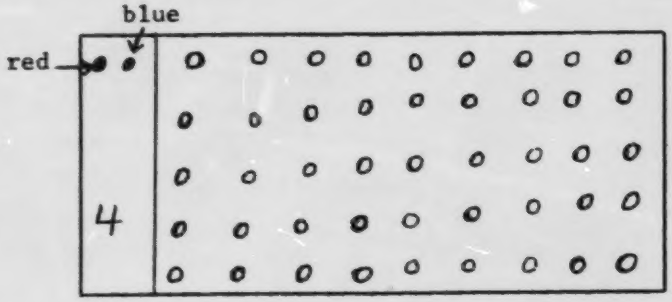






PEGBOARD PATTERNING

Materials:	7" x 14" pieces of pegboard 1" counting blocks pegs masking tape
Procedure:	Nail the pegboard to the blocks at all four corners. These blocks will serve as feet for the pegboard. Using masking tape cover the left side of the pegboard from top to bottom, so that the first two holes of each row are covered. Place alternating colors on the tape. Choose colors that match the colors of the pegs.



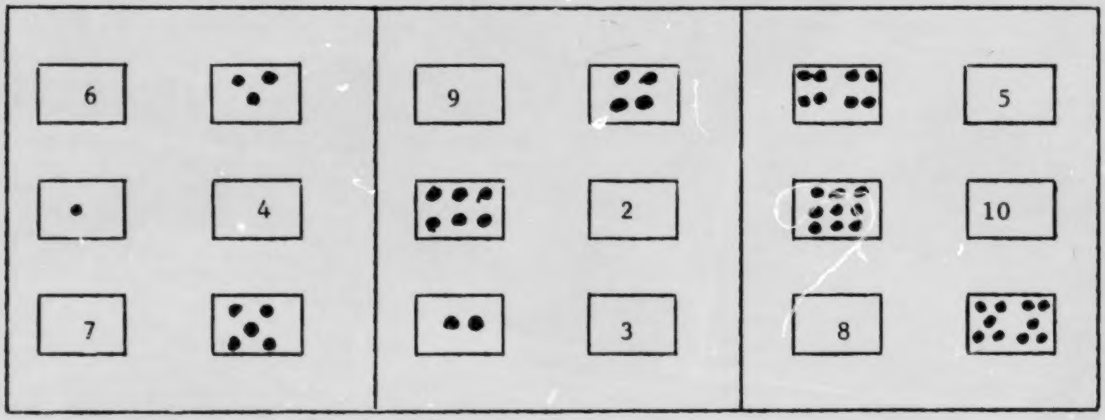
INSTRUCTIONS FOR PEGBOARD PATTERNING

1. Give the child the pegboard and a box of pegs.
2. Require the child to select the correct color of pegs and form two or three sequences of the given pattern on the right hand side of the pegboard.
3. If a numeral has been written on the tape, the child must place that number of pegs on the board.

POCKET MATH

Materials: 1 - 24" x 36" piece of tagboard
18 - library pockets
1 - deck of 3" x 4" construction paper cards

Procedure: Fold the tagboard lengthwise and paste it down. This will make a 24" x 18" double thick piece of tagboard. Fold this piece of tagboard into three sections. Paste six library pockets in each section (see illustration below).



Use a paper clip to hold either set cards or numeral cards to the library pockets. This will allow you to change the labels of the pockets easily.

INSTRUCTIONS FOR POCKET MATH

1. Give the student a deck of cards that corresponds to the numerals or sets found on the library pockets.
2. For kindergarten, merely ask the children to match the card to the pocket (numeral to numeral and set to set). First grade children may be asked to match numeral to set and set to numeral.

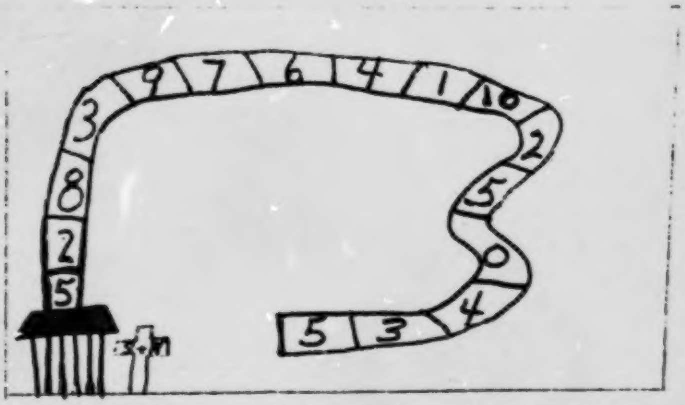
S & N RAILROAD

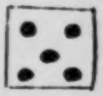
Materials:

Six pieces of poster board 12" x 14"
Deck of 2" x 2" poster board cards
Plastic train or any kind of markers

Procedure:

Draw a railroad track on each piece of 12" x 14" poster board. Divide track into 16 sections. Using the numerals 0-10 put one numeral in each section (not in order). Put set patterns 0-10 on each of the small cards.





Instructions:

1. Each child has their own board and train.
2. Children take turns picking a set card and moving it to the numeral that it matches.
3. First child around the track wins.

SNOWMEN AND LIONS

Materials:

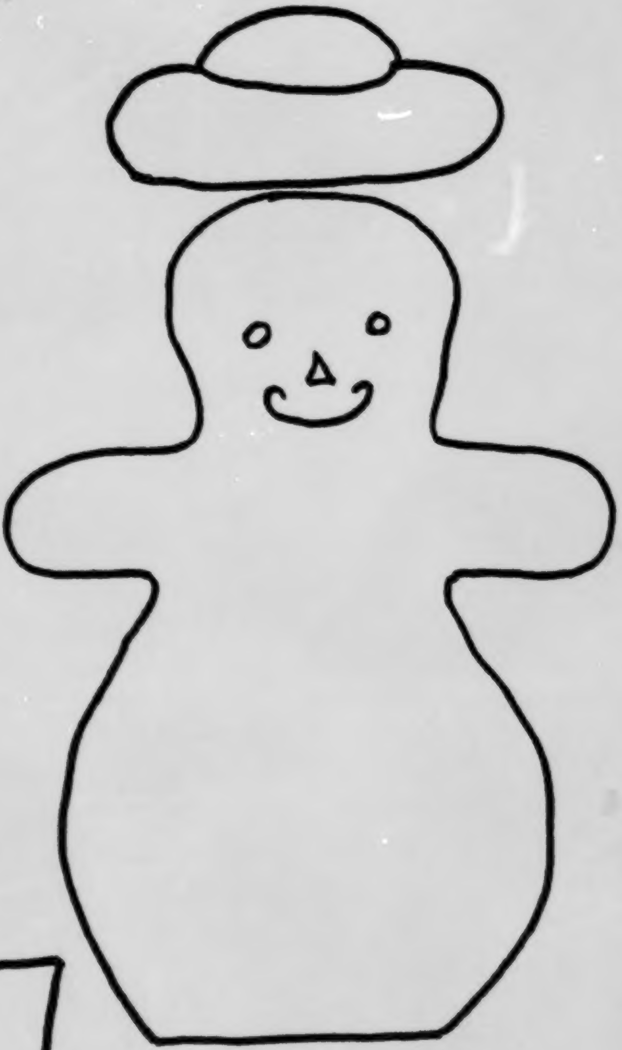
Set of lions with seats (ten each)
Set of snowmen with hats (ten each)
Gummed circles
Magic markers

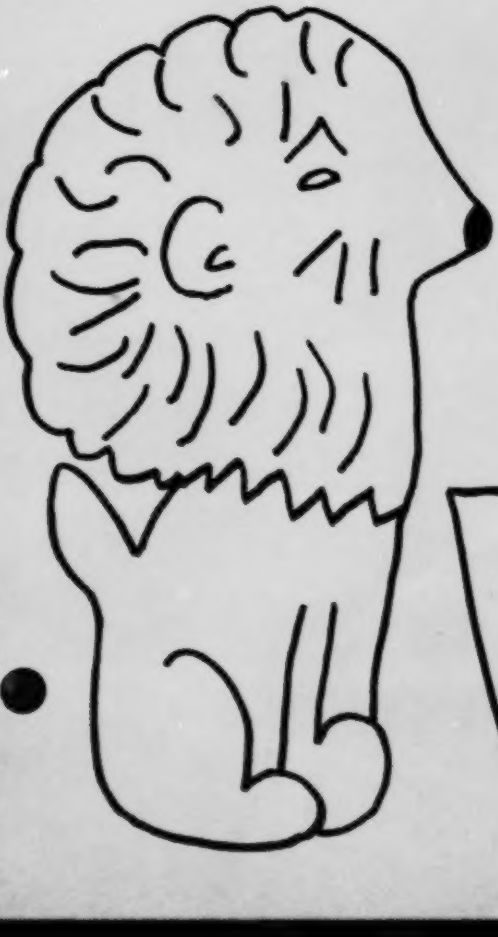
Procedure:

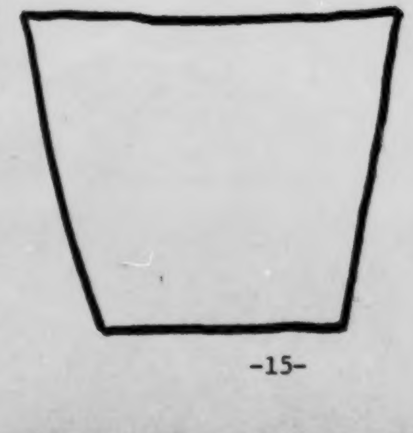
Color the lions and snowmen. Place sets on hats, numerals on snowmen (0 - 10). Place sets on lions, numerals on seats (0 - 10).

Instructions:

Hand out hats to students and have them match to snowmen. Same for lions and seats.







TWO SIDED BEANS

Materials:
1/4 pack of lima beans
newspapers
spray paint

Procedure: Lay out beans on newspaper and spray paint one side of them. Let dry and use for the following activities.

Directions:

1. Hold any number of beans in your hand. Shake your hand and look at the beans. Tell the number story. Example: if you hold 3 beans the number story could be 2 and 1, 1 and 2, 3 and 0, or 0 and 3. (Conversation of sets
2. Put so many "red" beans on a paper plate and put so many "white" beans on another paper plate. Tell how many on both paper plates. (Joining sets)
3. Put 3 red beans on one plate and count from 3 to decide how many more you will need to put on another plate. Make 6 altogether. (Missing Addend)
4. Use 3 colors to show 3 sets for: (3 addends)

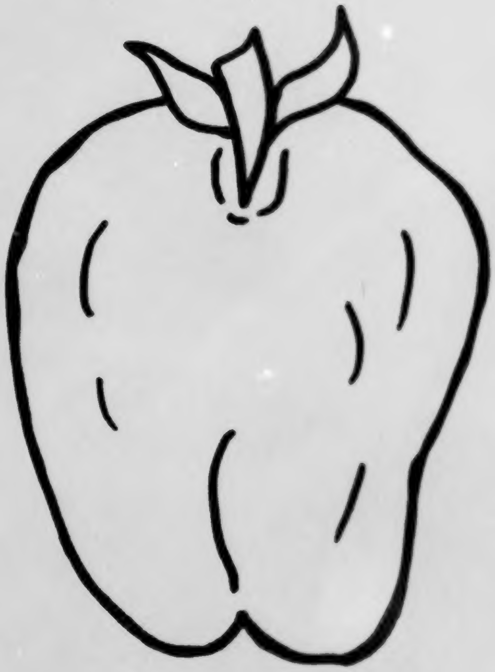
   Note: The child may like to use a juice can to shake the beans.

WORMY APPLE

Materials: tagboard apples

Procedure: On the back of each apple place, shapes, configurations, numerals, etc. On the backs of one or two apples, draw a worm. Use red, green, and brown markers to design the front of each apple.

Instructions: Place the deck of apples on the table with the apple side up. Each player selects an apple. If the child gives a correct response for the problem, he may keep his apple. Those apples the child can not respond to correctly and the wormy apples go back into the pile. The player with the most apples at the end of the contest, wins the game.



Numbers, Numeration

Order

BEFORE, BETWEEN & AFTER

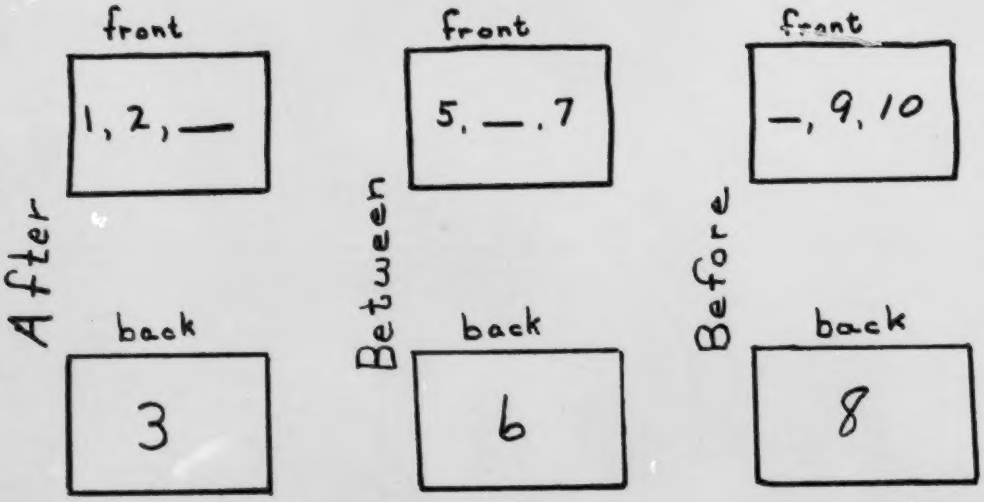
Materials: Deck of cards

Procedure: 1/3 of the deck should contain "Before" Problems (i.e, ____, 9, 10). Put the answer "8" on the back.

1/3 of the deck should contain "Between" Problems (5, _____, 7). Put the answer "6" on the back.

1/3 of the deck should contain "After" Problems (1, 2, ____). Put the answer "3" on the back.

Instructions: One child holds the cards while the other one responds. If he is correct, he gets the card, if not, it goes to the back of the stack.


front
1, 2, —
After
back
3
front
5, — , 7
Between
back
6
front
—, 9, 10
Before
back
8

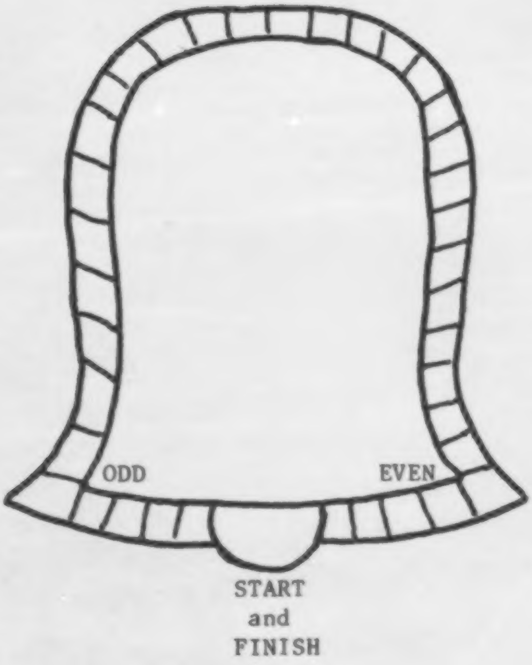
BELLRINGER GAME

(Odd - Even Race)

Materials:	1 - 24" x 24" piece of tagboard Die for each player marker for each player
Procedure:	Mark off game board as shown in illustration. Place sets or numerals on each face of the die.

Instructions:

1. Each player puts his marker at starting place.
2. Each player rolls the die to decide whether he will take the even or odd tract of board.
3. Every player rolls the die to start the game. If there is an even number of spots, the player on the even track moves his one space.
4. The players alternate rolling the die and moving their markers until player reaches the end of his track.



BUTTER TUB MATH

Materials:

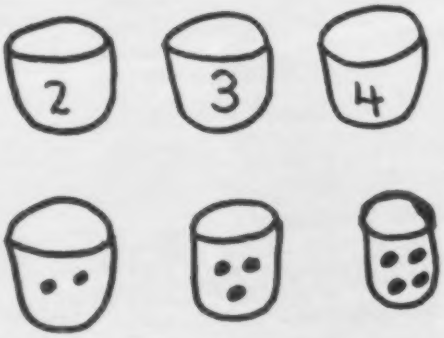
11 butter tubs
pegboard pegs or counting cubes
small pieces of various colored construction paper

Procedure:

Glue construction paper to the bottom inside the butter tubs. Use the same colors as the pegs or counting cubes. Mark one side of the tub with a numeral 0-10 and the other side with a corresponding set.

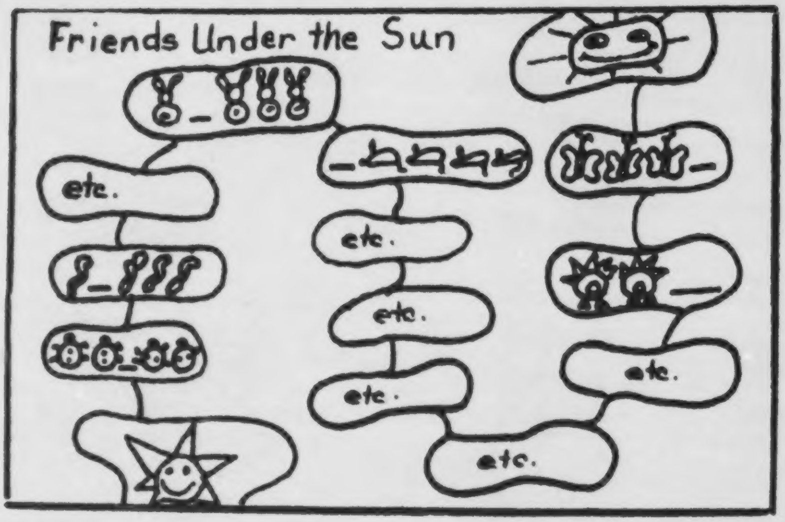
Instructions:

1. Give the child all the butter tubs.
2. Require the child to arrange the butter tubs in their proper numerical sequence.
3. The child then must place the correct color and number of pegs or cubes into the tubs as designated by the color of the construction paper and the numeral on the side of the tub.
4. Check to see if the child has arranged the tubs in correct order and that they contain the correct number of objects.



FRIENDS UNDER THE SUN

Materials:	Follow the construction directions for the basic step-a-set game board.
Procedure:	Each space on the pathway contains a picture of four animals in a row with one position left blank somewhere in the line-up. (Example: (XXXX_), fifth (XXX_X), fourth (XX_XX), third (X_XXX), second (_XXXX), first.)
Instructions:	The student rolls the number cube and moves his playing piece the number of spaces shown on its top face. The pupil must then state the missing ordinal for the animal line-up on this space. If he gives a wrong answer, he moves to his previous position. The first student to reach the finish line is the winner.



INEQUALITY GAME

Materials:

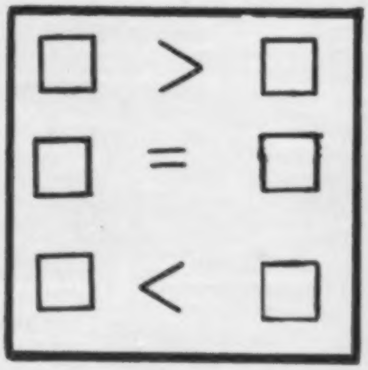
1 - 6" x 8" piece of styrofoam
6 - counting cubes
1 - can
1 - 6" x 8" piece of cardboard

Procedure:

Square holes large enough to hold the counting blocks are cut in the styrofoam (as shown in the following illustration). The 6" x 8" piece of cardboard is glued on the back of the styrofoam. The symbols >, =, and < are placed on the board (as shown in the illustration). Numerals are made on the faces of the cubes.

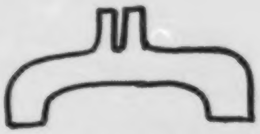
Instructions:

1. Only two to four players are allowed to participate at any one time.
2. The six counting cubes are placed in the can.
3. A player rolls the cubes on the table, exposing the numbers of their top faces.
4. The player is asked to make as many correct number statements as possible, by placing the cubes into the holes of the inequality board. He must use the numbers shown on the top face of each cube.
5. The player finds the sum of the numbers played and records this as his score. The person with the most points at the end of the contest is declared the winner.



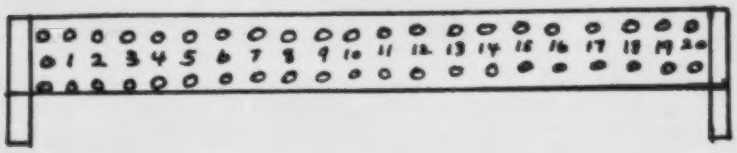
PEGBOARD NUMBER LINE

Materials:	rectangular piece of 1" pegboard, two holes wide and 27 holes long 2 - 6" pieces of 1" x 4" board
Procedure:	The pieces of 1" x 4" board are cut into the following design, to serve as stands for the pegboard:



end view

The stands will hold the pegboard upright. The front view of the pegboard number line is illustrated below:

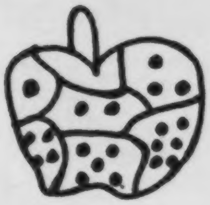


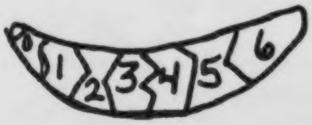
The holes are numbered as shown in the illustration.

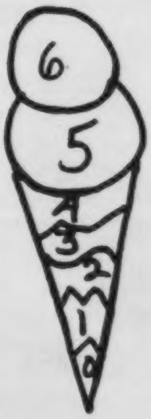
PUZZLES - ORDER

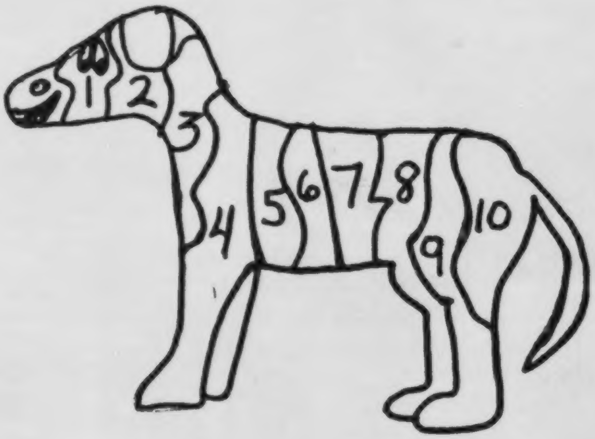
Materials:	Tagboard or poster board Magic markers
Procedure:	Cut some shape out of the tagboard, color it and put numerals or sets from 0-6 or 0-10 on the shape. Cut out each numeral or set so that each is on one piece.
Instructions:	The child must put the puzzle together according to the order of sets or numerals.

Examples:





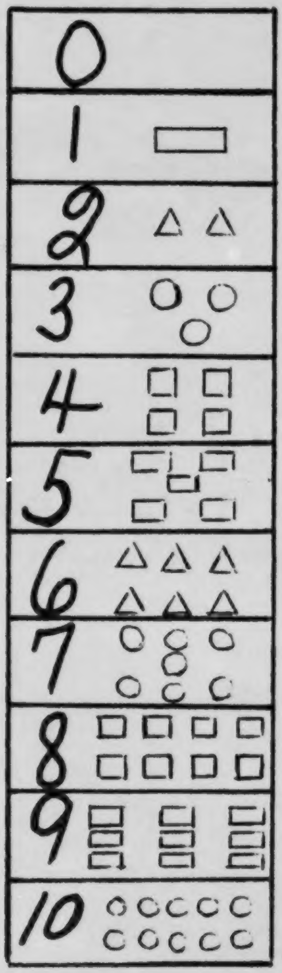




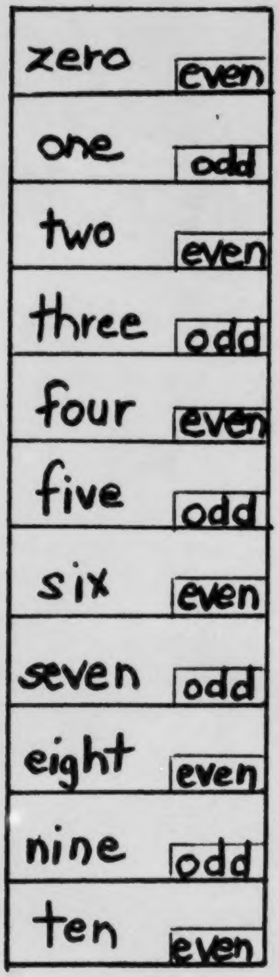
SAY IT

Material:	11 tagboard cards, 3" x 9"
Possible Concepts:	Colors, Shapes, Odd or Even, Spelling
Procedure:	Cards should contain numeral, shape, color, spelling of numeral and indication of even or odd.

front of cards


0
1
2
3
4
5
6
7
8
9
10

back of cards


zero even
one odd
two even
three odd
four even
five odd
six even
seven odd
eight even
nine odd
ten even

Instructions:

1. Place deck of cards in the center of a table.
2. For two children, use one deck; for more than two children, use two decks.
3. First player will draw card from deck, holding card with numeral and shape toward him. While player names numeral, shape, color, spells the numeral, and tells if numeral is even or odd, the other players can check accuracy from player's card facing them.

SAY IT, continued

4. If a player gives correct answers, he is permitted to keep the card.
5. The game continues with players taking turns until cards are all drawn or time elapses.
6. Player with the most cards is the winner.

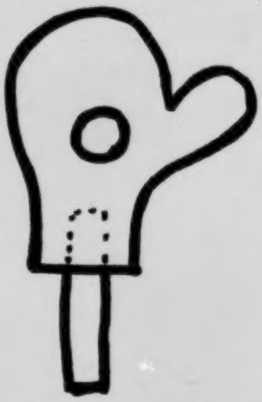
Numeral Recognition

CATCH A NUMBER

Materials: 1 - 20" x 20" piece of tagboard
2 - 10" x 14" pieces of tagboard
1 - 12" ruler or stick

Procedure: Rule the 20" square piece of tagboard into 2" squares. Beginning in the upper left-hand corner, number the squares consecutively from 1 to 100 to form a hundreds chart. Cut the two 10" x 14" pieces of tagboard in the shape of a catcher's mitt. Cut a hole 2" in diameter in the center of the mitt. (See illustration below.) Use masking tape to fasten the mitt to the end of a ruler or a stick.

Instructions: Use the catcher's mitt to highlight one particular number on the hundreds board.



Variation: Double Play

Materials: Same

Procedure: Fill the squares with numbers that are products for the basic facts. See the illustration below.

Instructions: One student catches one of the products with the mitt. The next student has to give two basic fact factors for the numeral. (e.g., If the student catches 15, the second student would give the factors 3 and 5.) The object of the contest is to attempt to stump your opponent.

Portion of the board

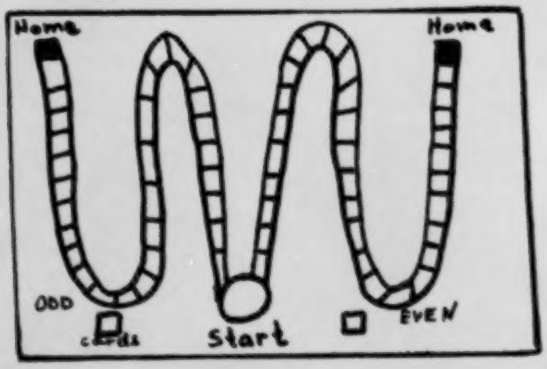
36	6	14	12
64	9	12	10
21	15	49	81

EVEN AND ODD GAME

Materials: 1 piece of tagboard 28" x 22"
50 cards 2" by 3"

Procedure: Draw and color your playing board as in the illustration below. Number each card 1 to 50. In the top right hand corner mark 1, 2 or 3 to designate how many spaces the child may move for the correct answers.

Instructions: Each player chooses whether he will play on the odd side or the even side of the playing board. Shuffle cards and place on the square labeled cards. Each player draws a card from the deck. He may move the number of spaces indicated by the numeral in the top right hand corner, if the card has a number on it that corresponds to his side of the playing board. (i.e., the player on the odd side can only move if he draws a card with an odd number on it). The object is to get to your home first.



GAMBIT

Materials:

5 - butter tubs
5 - sets of 1½" square pieces of tagboard (100 in each set)
piece of yellow, red, blue, green and black construction paper

Procedure:

Color code the butter tubs by gluing yellow, red, blue, green and black construction paper circles to the bottom of the tubs. Write the numerals 1 - 100 on the tagboard squares with corresponding colored pens. Put the squares inside the tubs.

INSTRUCTIONS FOR GAMBIT

1. Five children may play at one time.
2. Each child has a butter tub.
3. The teacher begins the game by saying "show."
4. When the teacher says "show," each child pulls out one square from his butter tub.
5. The child verbalizes the numeral on the card.
6. The child having the largest (smallest) numeral takes all the other children's cards by saying "Gambit."
7. The winner continues in the game to challenge four new opponents.
8. The final winner is the student with the most cards at the end of the period.

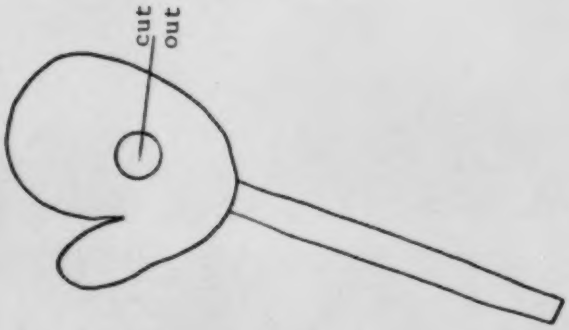
HUNDREDS BOARD AND MITT

Materials: 1 piece of tagboard 50 cm x 50 cm for hundreds board
1 piece of tagboard 20 cm x 45 cm for mitt

Procedure: Draw lines dividing the board into 100 squares. Each square will be 5 cm x 5 cm. Place the numerals as shown. Make a catchers mitt to be used to catch certain numerals.

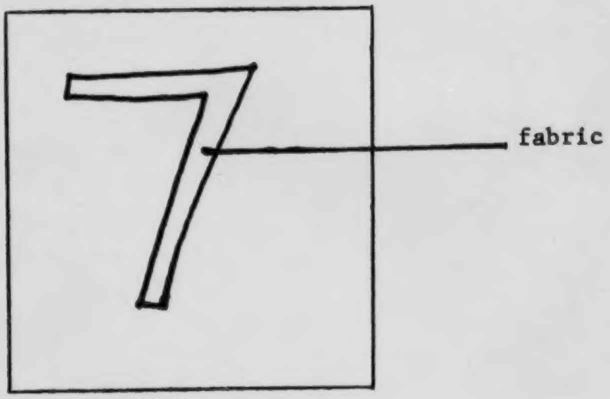
Instructions: The teacher "catches" certain numerals and the children have to identify them. The mitt can be used to teach before, between and after, more than, less than - counting by 2's, 5's, 10's -- and also to teach even and odd.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



KINESTHETIC NUMERALS

Materials:	10 pieces of tagboard (6" x 3") pieces of varying textures of fabric (velvet, burlap, etc.) or sandpaper
Procedure:	Cut 7" tall numerals (0-9) from the fabrics or sandpaper. Glue these numeral cut-outs to the 6" x 8" pieces of tagboard as illustrated below.



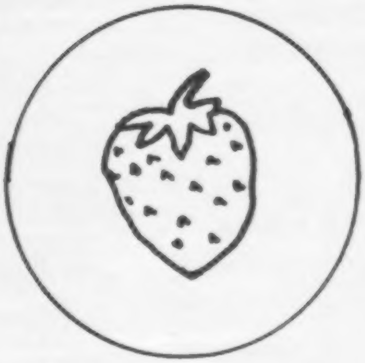
NOTE: Various commodities (popcorn, rice, etc.) could be used to form the numerals by gluing them to the tagboard.

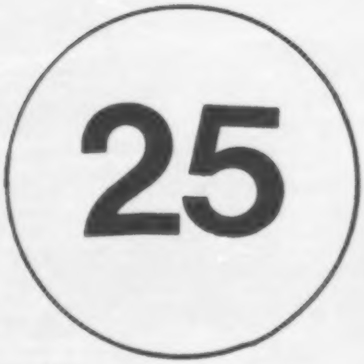
NAME YOUR GAME PLAN

Materials: 40 circles - 2" x 2"
Magic slates
Gummed stickers

Procedure: Write two digit numerals on back of circle. Place gummed circles on opposite side.

Instructions: Turn all circles numeral side down. First player turns over two circles and decides whether to add or subtract the numbers. If answered correctly he keeps the cards. Player with most cards wins.



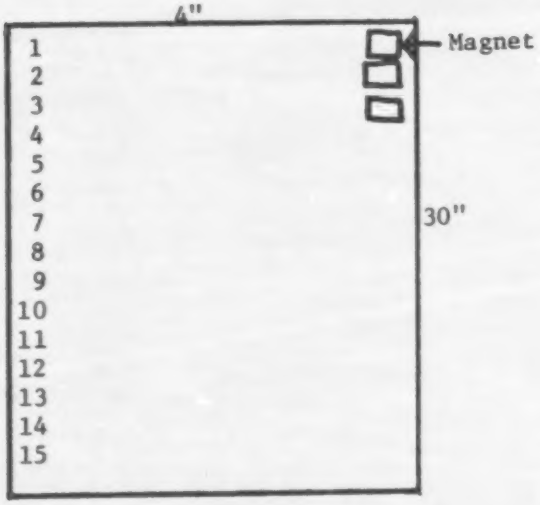


NUMBER WORDS

MATERIALS: 1 - 4" x 30" piece of tagboard
30 pieces 3" x " 2" tagboard
30 - magnets
30 - paper clips

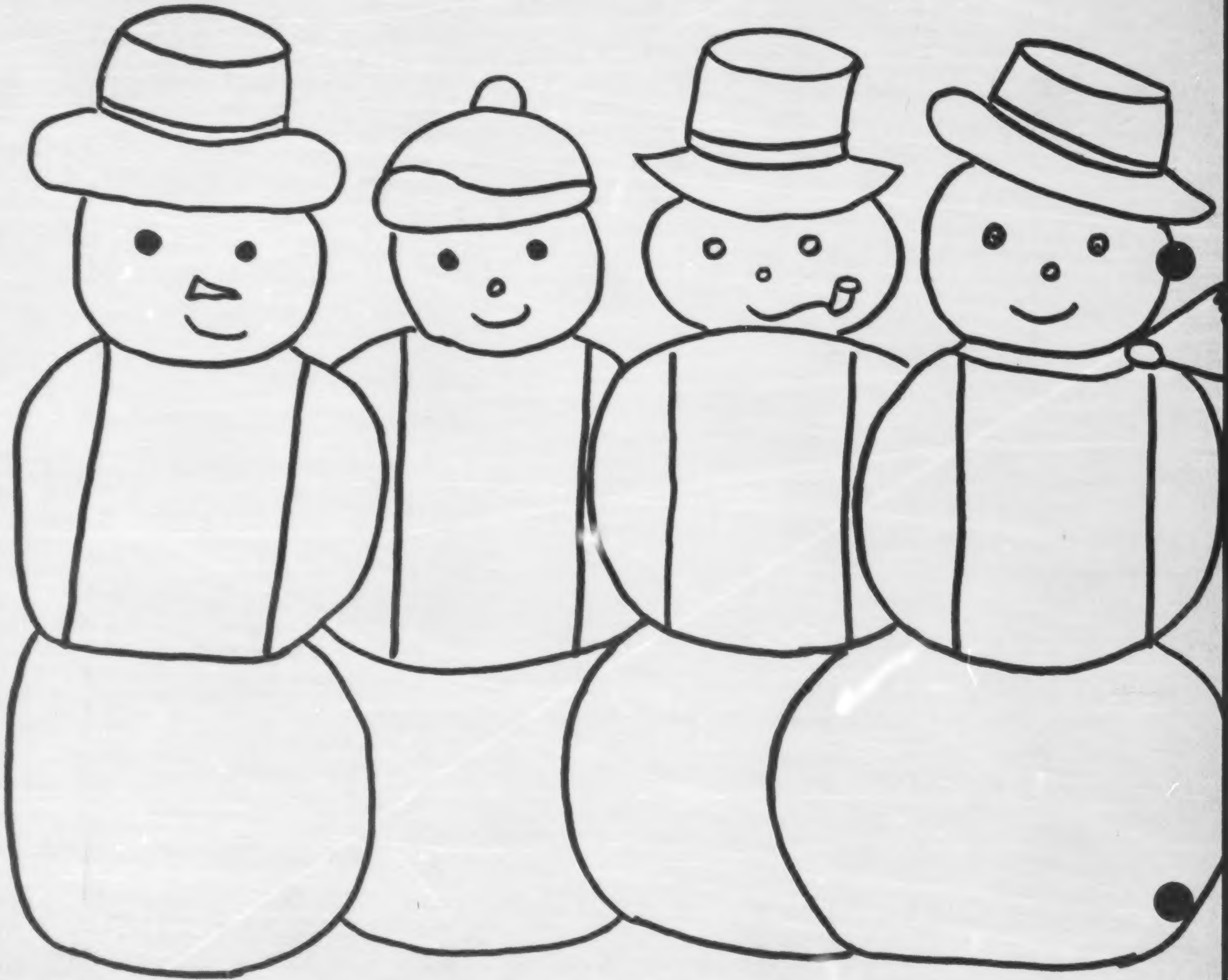
PROCEDURE: On the left side of 4" x 30" write the numerals 1 - 30. On the right side glue on a magnet across from each numeral. On the small 3" x 2" tagboard write the number words. Attach a paper clip to these.

INSTRUCTIONS: Mix the number words up. Have the child draw and then put on board beside correct numbers. If they miss, they keep it. The child with the most at the end of the game is the last place winner. The object is not to have any cards at the end of the game.



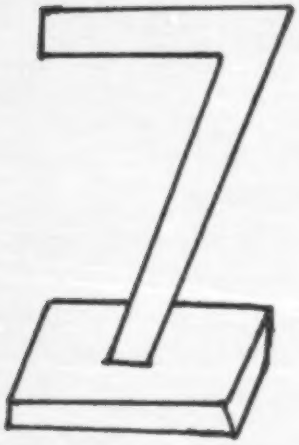
SNOWMEN

Materials:	one set of snowmen for each player magic markers scissors four strips of cardstock per snowman
Procedure:	Color in each snowman. Glue onto cardstock. Cut out the center part of the upper portion of the snowmen. Number the strips of cardstock 0 - 9 on each. Slip each strip into openings.
Instruction:	Teacher calls out a number: 4, 7, 2, 1 - student will show this on their snowmen.



STYROFOAM NUMERALS

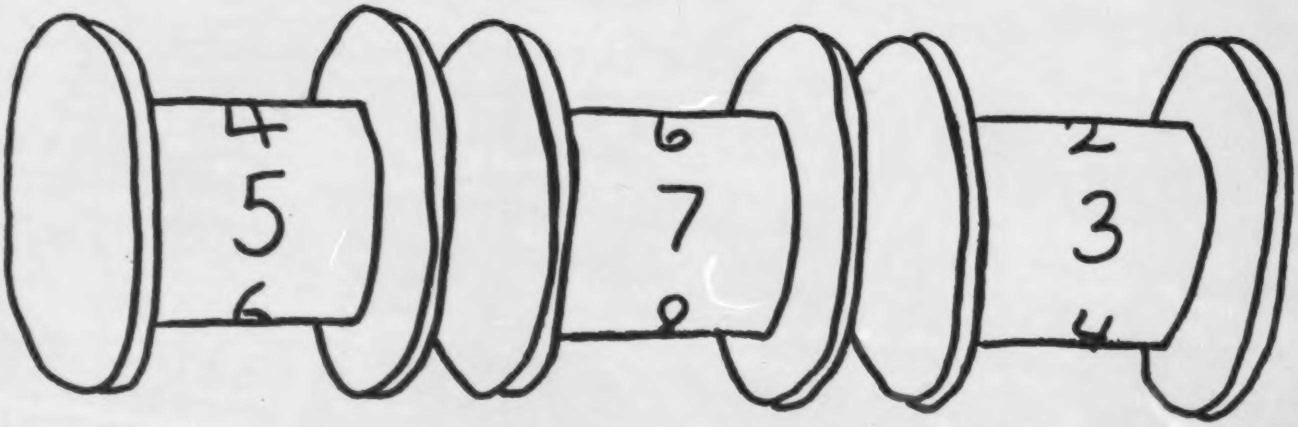
Materials:	pieces of 1" thick styrofoam 10" tall numeral patterns (0-9)
Procedure:	The teacher traces around the numeral patterns on the styrofoam. A sabre saw is used to cut out the numerals from the styrofoam. Ten 3" x 5" pieces of styrofoam are cut to serve as bases on which the numerals can stand. The numerals are glued to the bases, so they are able to stand upright (see illustration below).



Place Value

AN ODOMETER TO REPRESENT PLACE VALUE

Materials:	Three spools of the same diameter Grid Paper Glue
Procedure:	Cover the cylindrical surface of each spool with grid paper. Partition the grid paper into 10 equivalent strips, each strip being a horizontal slice from one end of the spool to the other. Number the strips 0 through 9. Place the 3 spools end-to-end on a pencil or piece of dowling. The spools can be rotated to expose the digits as on the face of an odometer. It can be made to represent the face of a gasoline-pump meter by labeling the right-hand spool surface with 0/10 through 9/10 instead of 0 through 9.



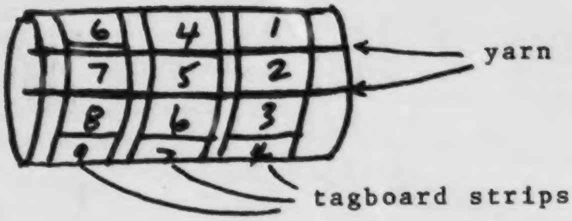
COFFEE CAN MATH

Materials:

- coffee cans
- plastic coffee can lids
- pieces of yarn
- pieces of tagboard

Procedure:

Mark the strips of tagboard with the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9. Space the digits evenly on the strip. Place the strip around the coffee can and scotch tape the ends of the strip together to form a band. Repeat with two more of the strips. Place two pieces of yarn on the can as shown in the illustration below. The yarn enables us to highlight a single number. (e.g. 752)

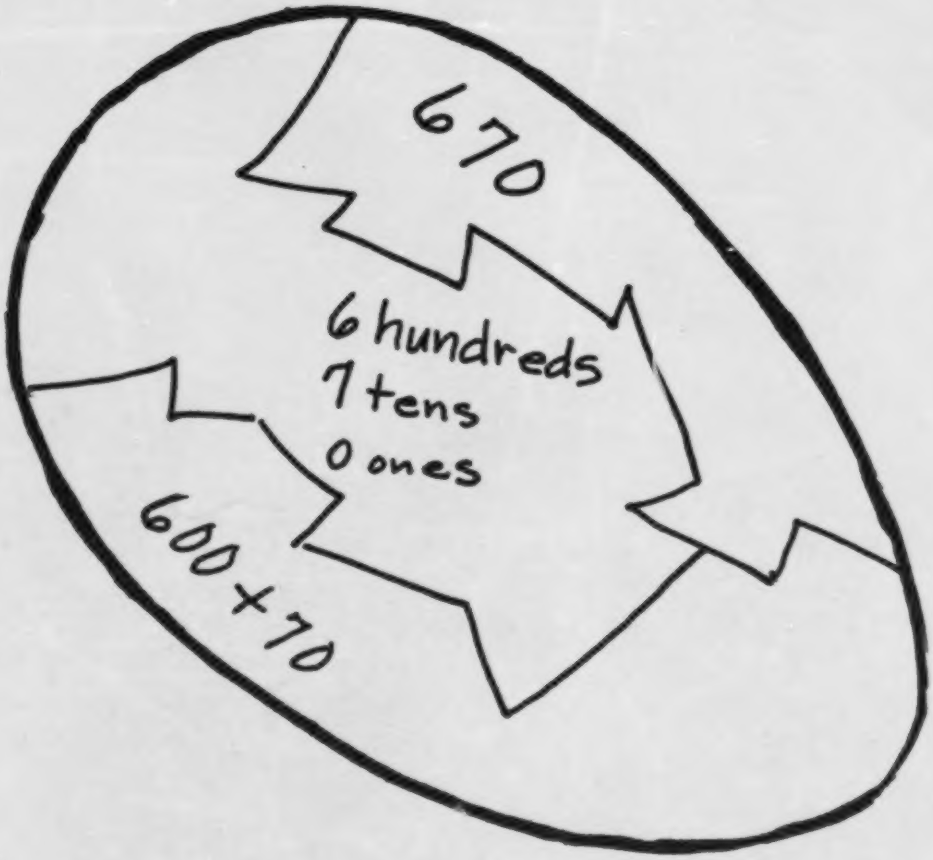


DINOSAUR EGGS

Materials: Railroad board, approximately 60 cm by 50 cm

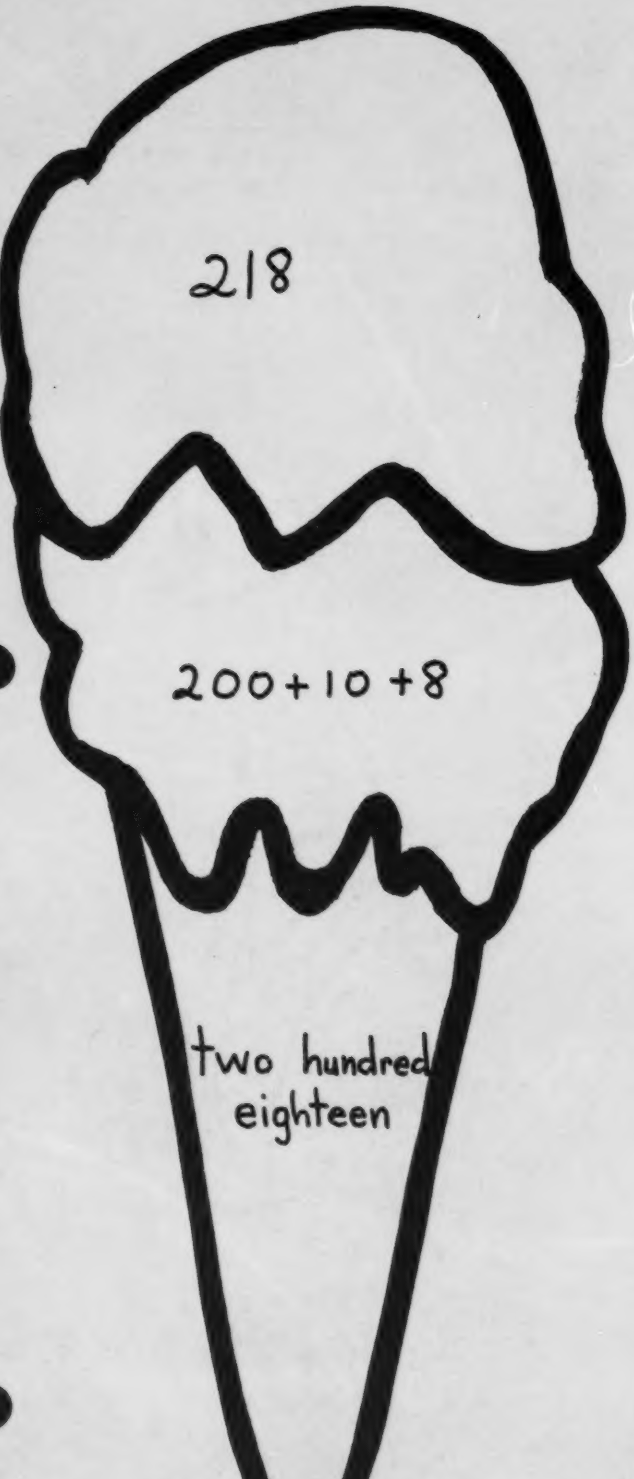
Procedure: On the railroad board draw 20 eggs similar to the one below. Write a three digit number, its expanded form, and its place value meaning on each of the eggs. Some suggested numbers are: 297, 308, 165, 272, 380, 444, 113, 221, 414, 132, 614, 421, 980, 879, 461, 462, 463, 471, 561, and 313. Cut the eggs into 3 sections, cutting each egg in a different way.

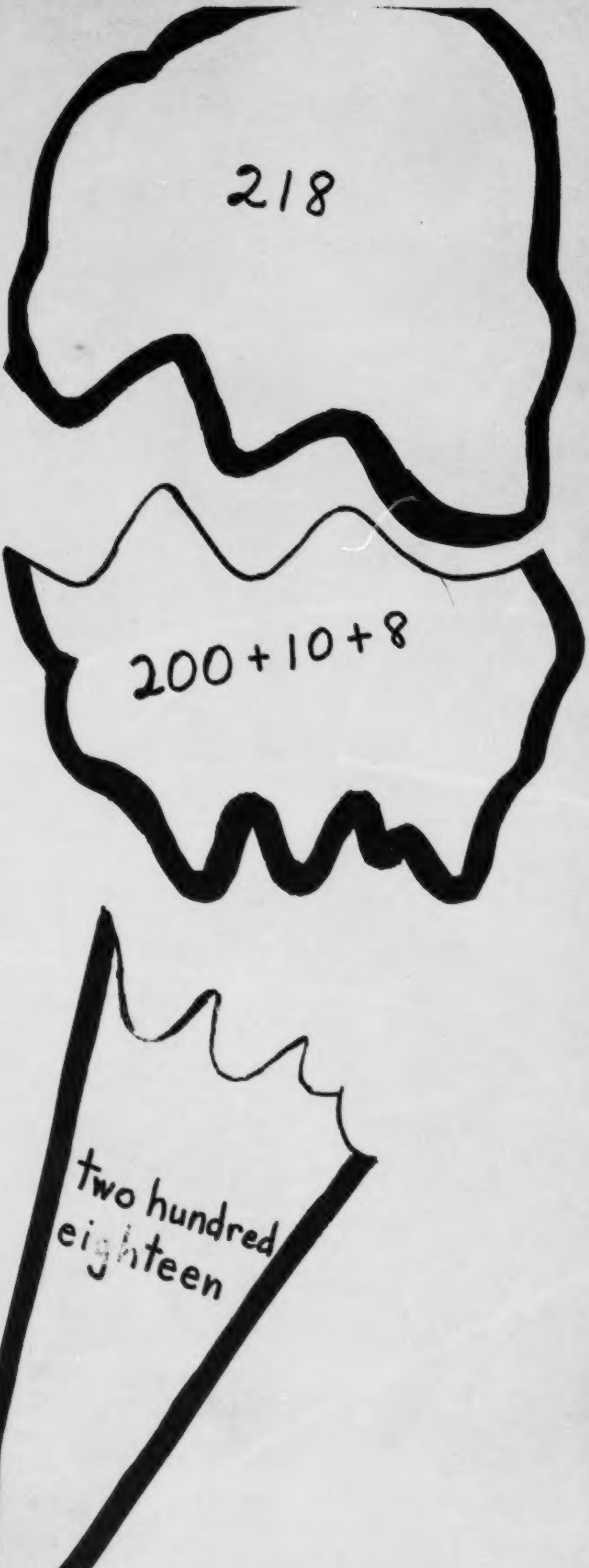
Instructions: The child matches each number to its expanded form and tow words explaining the place values of the digits. A perfect fit will indicate a correct match.



ICE CREAM CONES

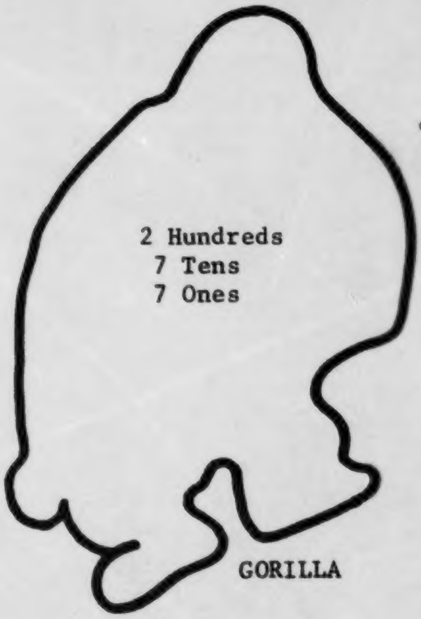
Materials:	Posterboard or cardstock 8 1/2" x 11"
Procedure:	Draw and cut out ice cream cones (about 10" x 4") from posterboard or cardstock. Write numeral on one part, the expanded form of the numeral on another part and the number word on the third part. Color the ice cream cones, laminate, and cut apart.
Directions:	Students use the pieces to make complete cones whose parts match. This activity may be used on the magnetic board if magnets are placed on the back of the pieces.


218
200+10+8
two hundred eighteen

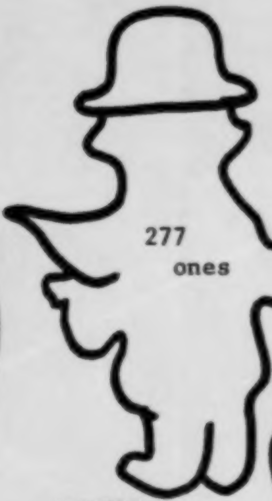

218
200+10+8
two hundred eighteen

MATCH-BIG HUNTER

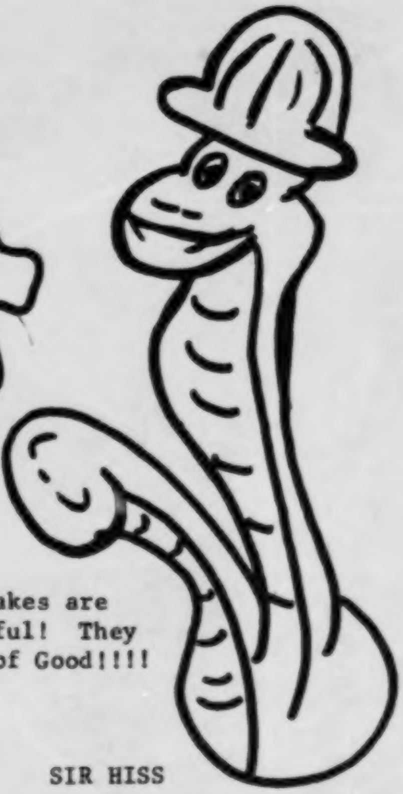
Materials:	24 Hunter cards (each 3 digit numerals - e.g. 376) 24 Gorilla Cards (each place value 3 hundreds, 7 tens, 6 ones) 1 Sir Hiss card (Snake)
Procedure:	Cut out the above cards in the shapes shown below. Be sure to make a "Gorilla" answer card for each "Hunter" problem card.
Instructions:	Deal out seven cards to each player. (Hunter and Gorilla). The rest are placed in the center, face down. Pairs are "booked". The pupils take turns drawing from the center pile and discarding (as in rummy). There will be two winners. The one with the most pairs and the holder of the "Sir Hiss" card.



GORILLA



HUNTER



Snakes are
Beautiful! They
do Tons of Good!!!!

SIR HISS

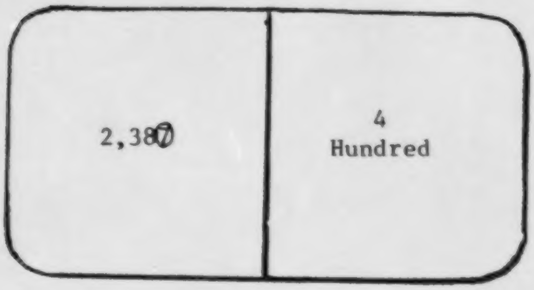
NOTE: This game can be adapted for other concepts whenever you are able to put problems on one card and answers on another.

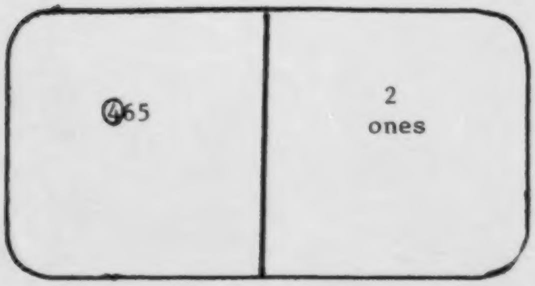
PLACE-VALUE DEVICE
(using beads)

Materials:	clothes hangers beads pliers
Procedure:	The clothes hangers are cut into rods that will hold ten of the beads. Ten beads are then strung on each rod. One end of the rod is bent into a hook, and the other end is bent into a loop. In this way, the rods of beads can be hooked together to form a long string of beads. A safety pin that will hold ten beads is made from a clothes hanger. This will be used when regrouping is needed in computation. A long, horizonal rod that will hold single beads is constructed. The rods represent sets of ten, the beads on the horizonal rod show ones, and a hundred is represented by hooking ten of the rods of ten together.

PLACE VALUE DOMINOES

Materials:	28 - 2" x 4" cardboard pieces Magic markers
Procedure:	Outline and divide each cardborad piece with a magic marker. On one-half of the cardboard write a three or four digit number. Circle one of the digit numbers with a black magic marker. Next write the place value of a number that has been circled on another piece of cardboard. Continue this procedure until all pieces have a matching dominoe.
Instruction:	Deal out all dominoes to the players. First player starts by having two dominoes that match. He may play as many dominoes as he has matches for. Then the play goes to the next person. The child who gets rid of his dominoes first is the winner.





PLACE/VALUE/WALK

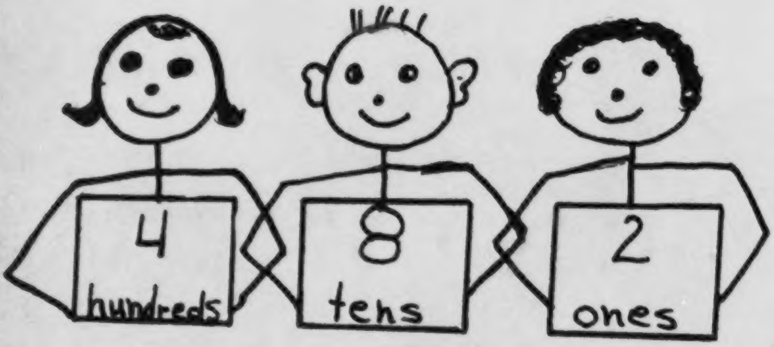
Materials: tagboard cut into 3" x 4" pieces (30 pieces)
felt pen or crayon

Procedure: Cut thirty squares of tagboard. With felt pen or crayon, number each card from zero to nine, making three cards which show each number. Then write "ones" or "tens" or "hundreds" on each of the three sets. Give 30 students in your room one of these cards.

Example:

Ones	Tens	Hundreds	One	Ten	Hundred

Instruction: I have given thirty of you cards with numbers on them. Look carefully at your number and at the number word written below that number. As I call a number, all those having cards needed to form this number come to the front of the room and arrange yourselves in the proper order to form the number, (e.g.)



For the number 482

REGROUPING BOARD

Materials:

1 sheet poster board -- size 28" x 22"
13 library pockets
31 red cards - size 3 x 5
32 orange cards - size 3 x 5
32 green cards - size 3 x 5
31 brown cards - size 3 x 5
1 blue card - size 3 x 5

Procedure:

Mark vertical lines 7 inches apart
Mark horizontal lines approximately 2 inches down for the first and then one single line 6½ inches down, and finally, a double line 6½ inches down.

Mark 3 decks of red cards - using digits 0-9. Add one that has TEN HUNDRED'S on it.

Mark 3 decks of orange cards - using digits 0-9. Add one card that has TEN TEN'S. Add another card that has ONE THOUSAND on it.

Mark 3 decks of green cards - using digits 0-9. Add one card that has TEN ONE'S. Add another card that has ONE HUNDRED on it.

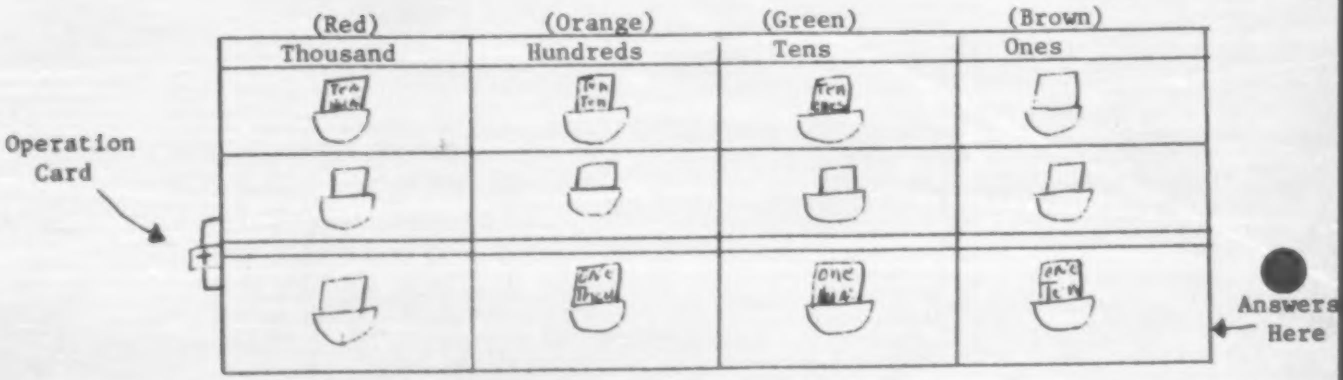
Mark 3 decks of brown cards - using digits 0-9. Add one card that has ONE TEN on it.

Glue one library pocket on the back of the poster board as shown below and write a plus sign on one side of the blue card and a minus sign on the other side. This will be your operation card.

Glue remaining 12 library pockets on as shown below and insert the decks according to color code as outlined.

Instructions

Used for showing regrouping problems in addition and subtraction. The advantage of using this board instead of the chalkboard to illustrate regrouping is the color coding.



RENAMING BINGO

Materials: 4 20 cm x 20 cm pieces of pellon or poster board

1 deck of cards

Procedure: Construct a Renaming Bingo game board for each participant similar to the illustration below.
Mark the cards with numbers that have been regrouped - e.g. 1 ten and 17 ones, 6 tens and 18 ones, 3 tens etc. Limit your number to those between 20 and 70.

Directions: Have the students select their own numbers for their card. Let them choose any numbers between 20 and 29 for the first column, any number between 30 and 39 for the second column, and any number between 40 and 49 for the third column, any number between 50 and 59 for the fourth column, and any number between 60 and 69 for the fifth column.
After the students have recorded their selections, cards are drawn and numbers are called in the form of 1 ten, 12 ones; 3 tens, 17 ones, etc. Give each student counters to cover the numbers called that they have on their boards. The first student to cover five in a row is the winner. This game can be adapted for numbers in the hundreds.

		FREE		

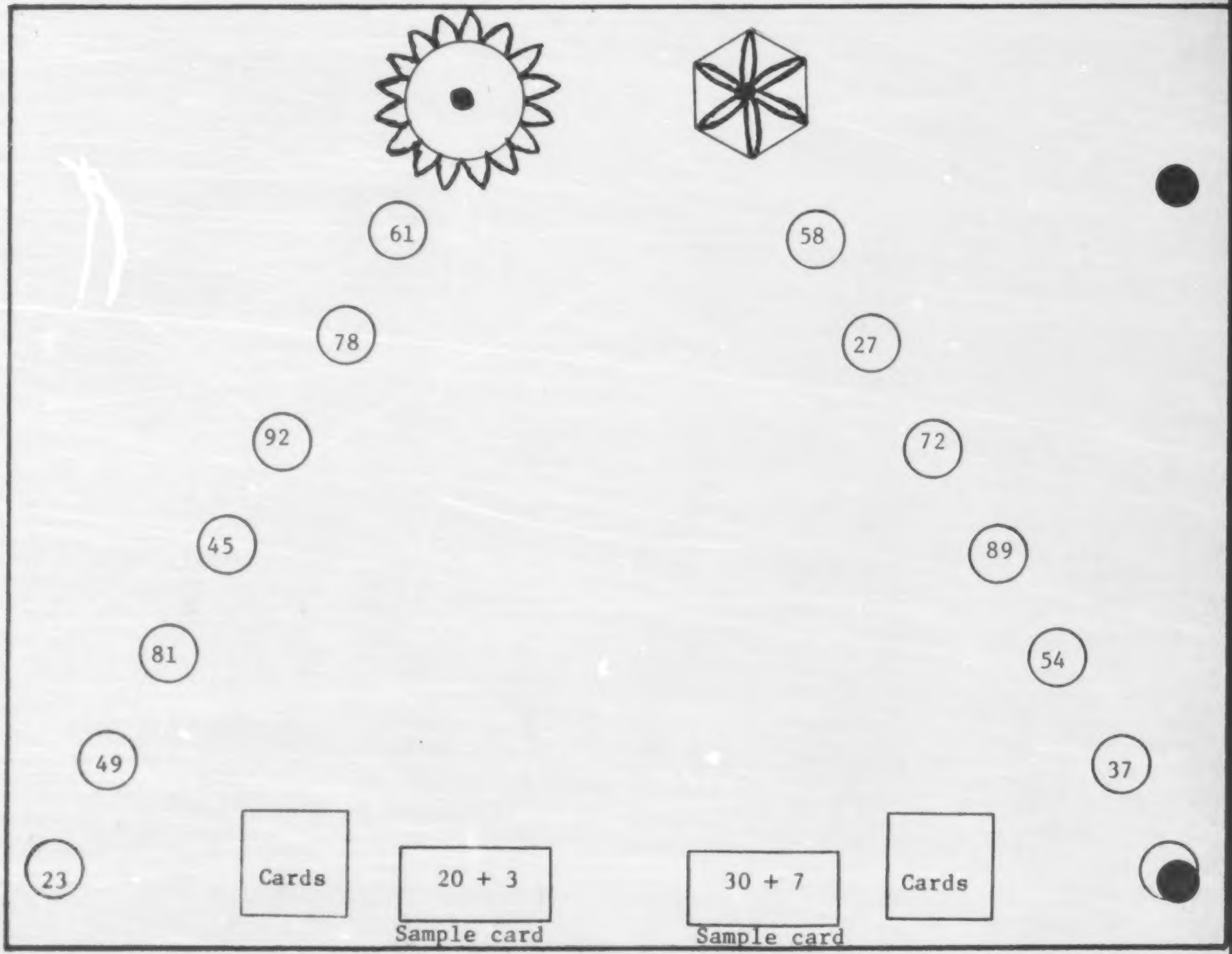
RENAMING TUG OF WARD

Materials:

1 - mover for each player
2 - deck of cards with numerals in expanded form
1 - playing board
1 - cube (numbered 1-4)

Procedure: Construct game board as in diagram.

Instructions: The cube is thrown to determine who should be the first player. (Highest number thrown.) The first player pulls a card and finds the numeral on the game board that shows what has been renamed and places his/her marker on that numeral. Each player repeats the above procedure. A student must move his/her marker to the numeral renamed regardless of the directions of that numeral. The winner is the player whose marker is on, or the closest to, the flower with the numeral after all cards are used.



TRADING ACTIVITIES

Materials: Manipulative materials such as chips, counters, bottle lids, beads, straws, etc.
Individual boards for each participant, Number Cubes (cubes with numerals on their faces)

Procedure: Color code the manipulative materials using 3 different colors, (Red - Green - Yellow)
Make 3 columns on individual boards and designate the ones column, Red, the tens column, Green, hundreds column, Yellow.

Instructions: Addition Concept - One cube is rolled. A set of red objects equal to the numeral shown is formed under the ones column on the board. Continue rolling the cube and have the children trade 10 red objects for 1 green object when they have 10 or more red objects. First student to get a yellow object wins the game.

Subtract - Each pupil places a yellow object in the hundreds column. Cube is rolled (Example: 6, the yellow object is traded for 10 green objects. 1 green object is traded for 10 red objects. 6 red objects are removed). The child continues to roll the number cube, subtracting the number of objects from his board as shown on the cube. The first student to subtract all his objects from his board wins the game.

Computation

Whole Numbers

Addition

BINGO

Materials:

Styrofoam or wooden cubes
felt pen
set of "bingo cards"
lima beans or similar markers

Procedure:

1. Cut the foam into cubes with a paper cutter. Use the felt pen to write a numeral on each side.
2. Make a set of cards with numerals in each square.

Concept:

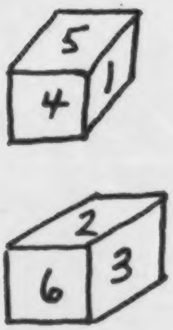
Match numerals with sets
Addition facts

Instructions:

1. One child is the leader.
2. The leader throws the cube-players add the two numerals-if they have the sum on their card they cover it with a bean.
3. The first player to "black-out" his card is the winner and is "it" for the next game.

Variety:

Have set dots on the cube and have players cover the matching numerals.



3	7	9	1
2	5	0	6
8	3	6	4
1	7	2	5

Sample card

BUG YA

Materials: 2 - cubes
container (box, can etc.)
scratch paper for scoring

Procedure: Put a bug on one side of each cube. (Hallmark makes a cute bug sticker) Put numerals 2 and 5 on opposite sides, put 3 and 4 on opposite sides, put 1 opposite the bug. (Note: you will have to use larger numerals for the larger addition facts.

Instructions: Each child takes turns rolling his set of cubes. He keeps a running score of his total.

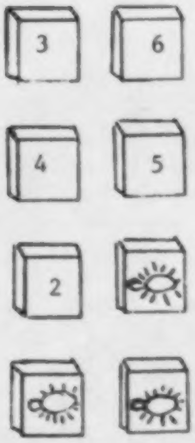
If one bug comes up, child subtracts the number from the total score.

If both bugs appear, child loses total score.

Use 2 cubes for each couple playing.

First child to reach 100 is winner.

Example:



add 9

add 9

(subtract 2)

(lose total score)

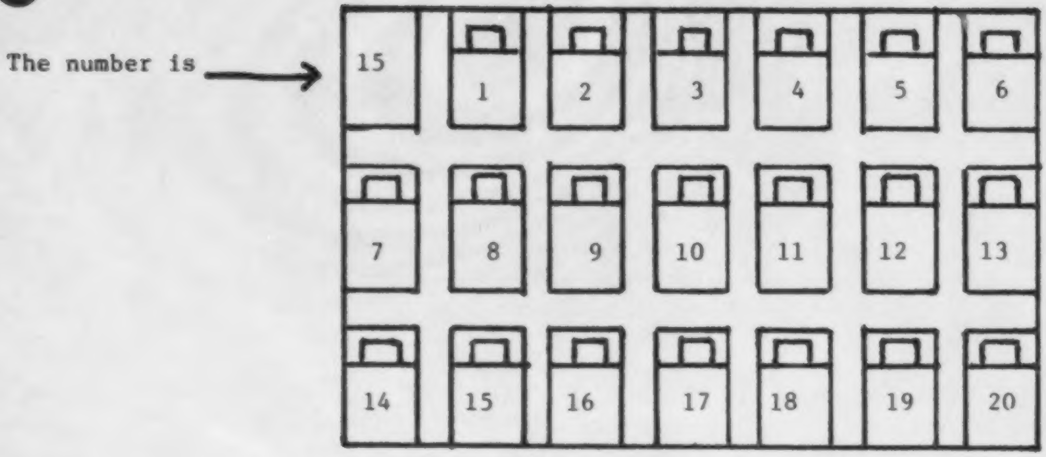
SCORE

9
+9
18
-2
16
-16
0

Concepts: Reinforce addition and subtraction. (Can be used for multiplication by multiplying cubes instead of adding. Subtract as above).

The small child can play this by keeping track of his score with quiet counters. After 3 times around, each child counts the number of counters he has. The one with the most is the winner.

CONCENTRATION



Procedure: Glue 3 rows of 7 library pockets on posterboard. Number the pockets 1 through 20. Cut 21 cards from construction paper 3" x 6".

Example: If you were using the number 15 you would prepare the following cards, writing the number on the lower half of the card so that it is hidden when placed in the pocket.

8 7 9 6 1 14 7 8 6 9 2 13 10 5

11 4 12 3 15 0 15 (this is for the number in pocket)

We have 10 combinations adding up to 15. The cards should be placed in the pockets. The student calls out any two numbers on the pockets. The teacher pulls up the 2 cards revealing the numbers, if they add up to 15 she then removes the 2 cards and gives the student a chip. If they don't she puts the cards back in the pocket and proceeds to the next student until all cards have been exposed. The purpose is to learn all of the math facts for a given number. This is best played with from 2 to 5 students. The student with the most chips is the winner. Prepare cards for numbers 5 to 20. Some combinations will have to be repeated in order to have 20 cards. I would suggest for first graders you only prepare 10 cards with 5 combinations for the number 5.

Example: 3 2 0 5 1 4 2 3 3 2

For this you will only fill 10 pockets.

DISK MATH

Materials:	equal number of jar lid flats (Kerr or Ball) large numbers cut from a calendar
Procedure:	Each child has an equal number of discs with numbers on them. Turn the disks upside down. Each child stirs or mixes his own disks before each play. The opponents select two disks from each other's supply. They turn them over simultaneously and give the sum of the two numbers. (Be certain that each player checks his opponent's sum!) The person whose sum is the greater gets to keep his opponent's disks. The game continues until one player has all the disks in his possession. Three pairs may be playing this game at each center. Children may exchange partners and continue with the game.

64

GRID MATH

Materials: dittoed grid-math sheets
2 - cubes

Procedure: Make dittoed grid-math sheets as illustrated below.
Mark each cube with the numerals 1 - 6.

+	1	2	3	4	5	6
1						
2			5			
3		5				
4						
5						
6						

INSTRUCTIONS FOR GRID MATH

1. Each player has a blank card.
2. The first player rolls the two cubes. If the following is rolled $\boxed{3}$ $\boxed{2}$, the child would add three and two and record this answer on the appropriate grids of his card. See the above illustration.
3. The next player takes his turn and follows the same procedure.
4. The players alternate, rolling the cubes and filling in their cards until one player completely fills one line across, down, or diagonally and calls out quietly "Grid-O."

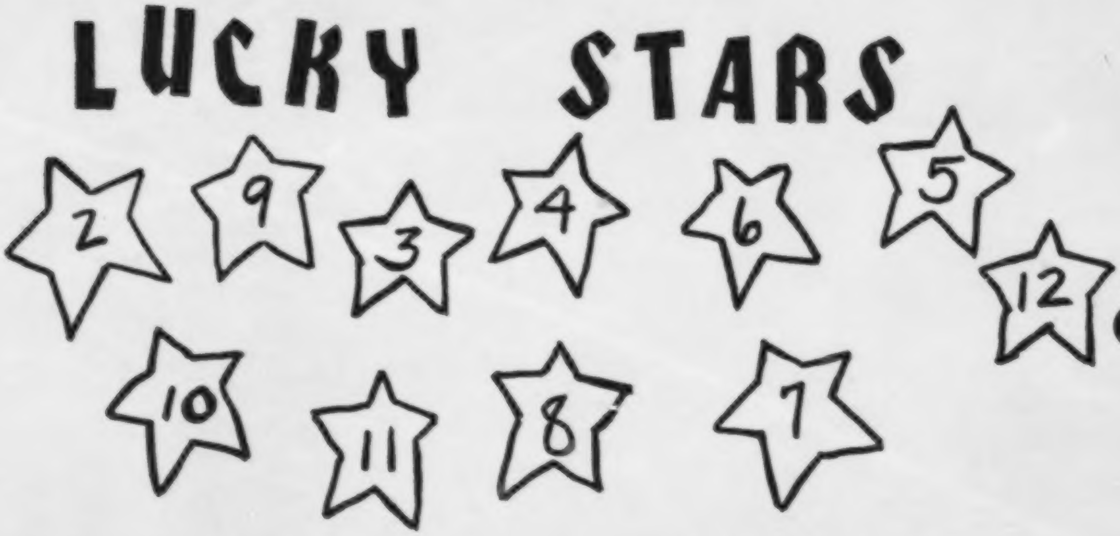
LUCKY STARS

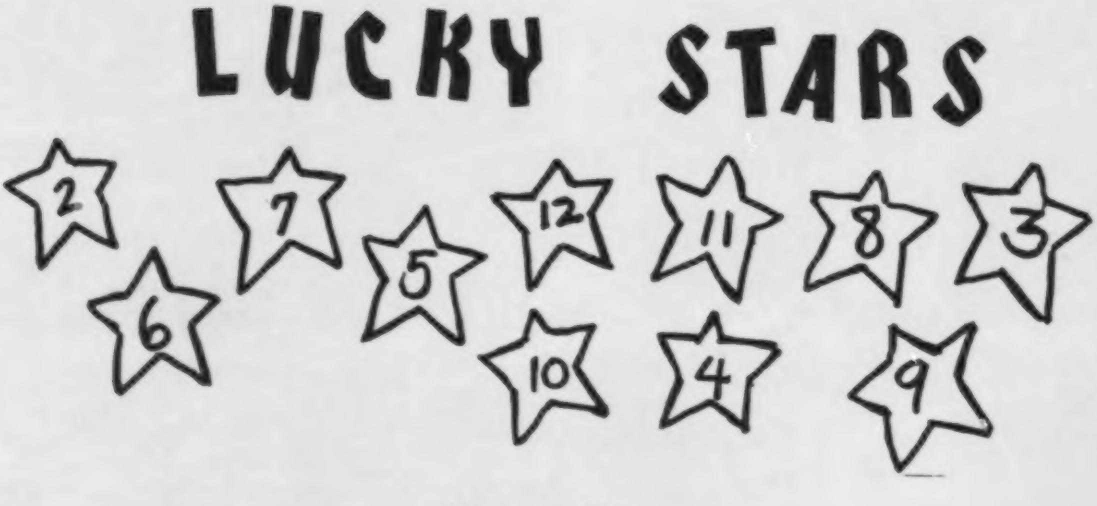
Materials: 2 cubes

1 10" x 12" piece of pellon or posterboard

Procedure: Construct a game board similar to the one illustrated below.

Instructions: Toss two number cubes which are numbered 1-6.
Add the two numbers and cover the sum with a marker.
Toss the cubes again. Stop when the sum you get has already been covered.
Let the next player take a turn.
The player with the most covered numbers is the winner.


LUCKY STARS
2
9
3
4
6
5
12
10
11
8
7


LUCKY STARS
2
6
7
5
12
10
11
4
8
3
9

MAKE TEN

Materials: 53 die cut cards

Procedure: Mark numerals on the deck of cards made up of the following:

8-1's 8-2's 7-3's
8-4's 6-5's 6-6's
5-7's 3-8's 2-9's

Instruction: Shuffle the deck, and turn two cards face up. Each player draws one card from the deck on his play and turns it face up. On his turn, if he sees a way to add up to 10 from the face up cards, he takes those cards. If he cannot make any sum of ten, his drawn card is placed on the table with the other face up cards, and he passes. The student with the most cards when the deck is finished is the winner.

Variations can be played with other numbers and sums such as make fourteen, make seventeen, etc.

PICK YOUR ADDENDS

Materials: 4" x 28" poster board for each player
3 cubes
18 markers for each player

Procedure: Make a game board for each player. A game board is a piece of 4" x 28" railroad board separated into 18 squares. The squares are numbered from 1 through 18. Cut 18 one-inch squares from railroad board for each player. Three dice are needed.

Instructions:

1. 2-4 players
2. Each player has a game board and eighteen squares.
3. The first player rolls the dice and counts the number of dots. He puts squares on his board to cover any combination of numbers whose sum equals the number he rolled.
4. The game ends when one player covers all his squares. A player must roll the exact number he needs to cover squares on his board. If he cannot play after a roll of the dice, he passes for the round.
5. The winner is the first player to cover all of his squares.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

PO - KE - NO

Materials and Procedure:

(1) 8 po-ke-no cards. Be sure each card has a different number used for the four-of-a-kind.

(2) Dice or addition facts card to correspond to each number used.

(3) 4 containers marked po-ke-no, four-of-a-kind, centers and four corners.

PO-KE-NO				
6	6	6	6	

four-of-a-kind

(4) Poker chips and markers.

Instructions:

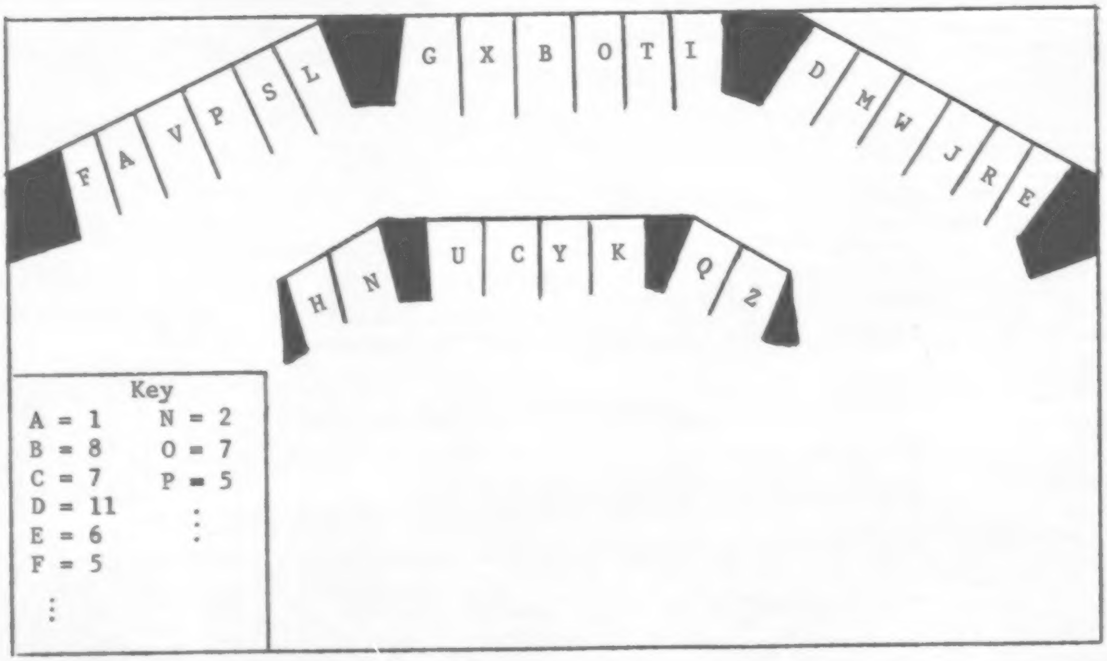
Each child is given 8 to 12 poker chips, a card, and markers. Each child puts one (1) chip in each container. Play the game like Bingo, calling number facts and child covers answer. The first child to cover the answers corresponding to the containers gets the chips in that container. Continue to play until one child calls "po-ke-no" or fills a line as in Bingo. The game starts over, leaving the remaining chips in the containers not used in that game.

PUTT - PUTT MATH

Materials:

1 - 24" x 36" piece of tagboard
1 - 9" x 12" piece of tagboard
1 - set of toy cars
2 - wooden blocks

Procedure: Make a model of a parking lot on the 24" x 36" piece of tagboard as shown by the illustration below. Mark each wooden block with the numerals 1 - 6. Make a key on the 9" x 12" piece of tagboard by listing the letters of the alphabet from A to Z. Associated with each letter of the alphabet is a number 1 - 12. See the sample key below.

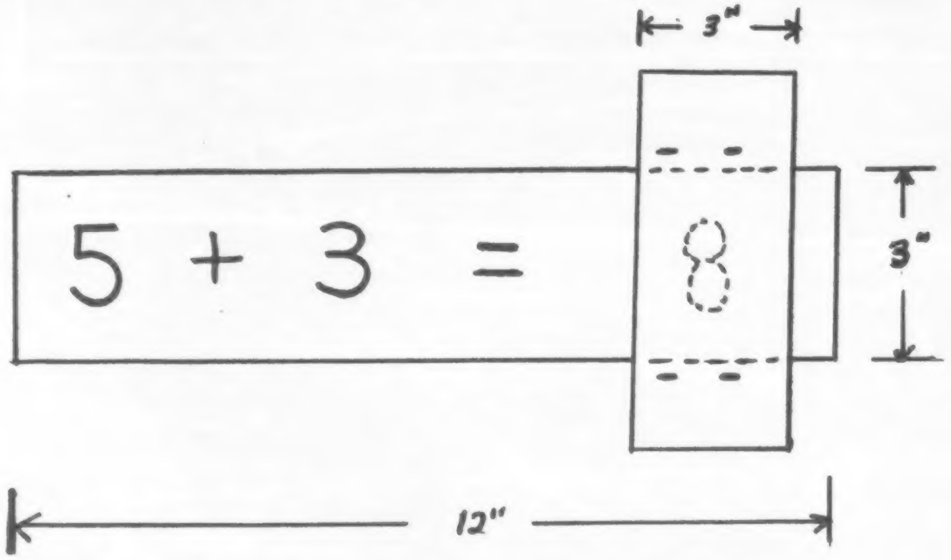


INSTRUCTIONS FOR PUTT - PUTT MATH

1. Two or more players divide equally the cars that are available.
2. They take turns rolling the cubes.
3. They must find the sum of the numerals from the top faces of the cubes.
4. They must then use this sum to find a parking space from the key (e.g. 11 = D).
5. The child then drives his car to the space. If the space is occupied he loses his turn.
6. The first player to park all of his cars is the winner.

SLIDE-O-MATH CARD

Materials:	3" x 12" piece of tagboard 3" x 9" piece of construction paper stapler marking pen
Procedure:	A number sentence is written on the 3" x 12" piece of tagboard. The 3" x 9" piece of construction paper is then folded in half. The halves of the construction paper are stapled together (as shown in the illustration). This allows the construction paper to slide back and forth along the problem card, covering up any desired portion. It makes an excellent flash card for drill work.



SPRINGTIME PLANT A FLOWER

Materials: tagboard, magnetic tape, number cube

Procedure: Make a flower set for each player. A set consists of three two inch flower centers and twenty-four petals cut from tagboard. Cut the petals so eight will fit around one center. Mark the centers with such sums as 13, 14, and 15. Write the addition combinations for these on the petals. Put pieces of magnetic tape on the back of each center and petal. One cube is needed. Make a key so players can check answers as the game is played.

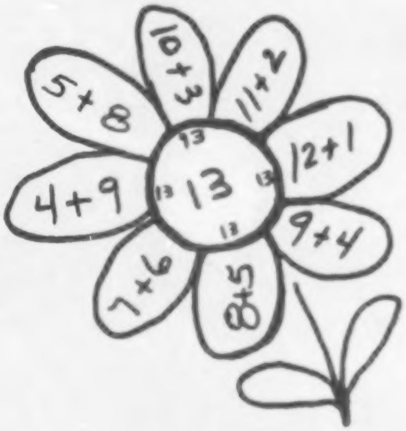
Instructions:

1. Each player puts his flower centers on a magnet board. He puts his petals face up where he can reach them easily.

2. The first player rolls the cube to determine how many of his petals he can put up during the first round. He chooses petals and puts them around one or more of his centers. As he puts each petal in place he tells the combination and its sum,(e.g., "12 plus 2 is 14"). If a player puts a wrong combination with a sum, he does not get to add the petal to the flower.

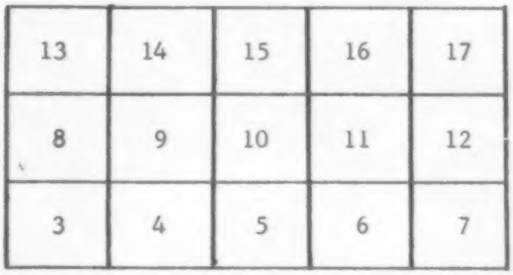
3. Play continues with each player taking his turn in order.

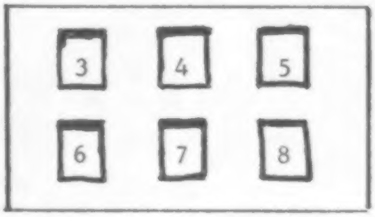
4. The winner is the player who completes his three flowers first (Make several games using different sums and combinations so children can practice adding different numbers.) Petals are different colors.



TEACHER'S GET IT TOGETHER

Materials:	22" x 28" cardboard library pockets deck of playing cards (2-10)
Procedure:	Glue the library pockets to the piece of cardboard. Place answers to addition problems on the library pockets.
Instructions:	Require the children to put two playing cards in each pocket, the sum of whose numbers is the same as the number of the pocket. For example, for the pocket labeled 6, the child could use any 2 cards whose sum was 6 (i.e., two 3's, 2 and 4, 1 and 5, etc.). The sets of heart's, diamonds, clubs, or spades on the cards could be counted for those who do not know addition facts. After the child has gained proficiency using two cards you may want him to use 3 cards to form the sum.

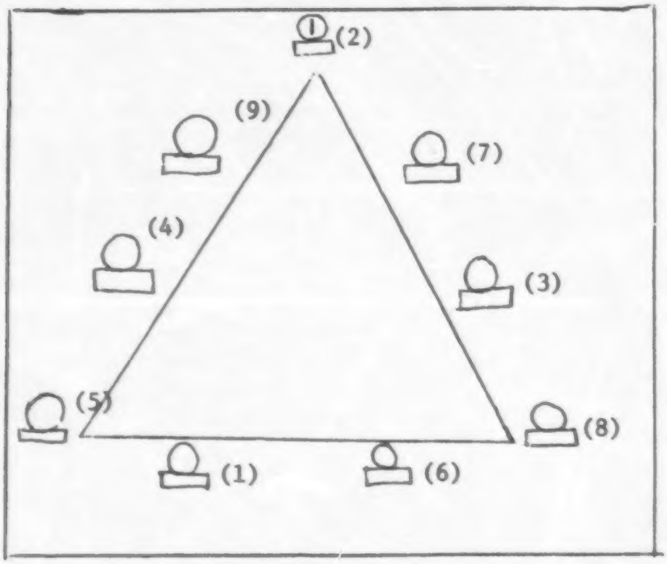




Get a greeting card display box from a local store and label each of the slots with answers. Many stores discard these boxes after special holiday (Father's Day, Mother's Day, etc.).

TRICKY TRIANGLE

Materials:	22" x 28" cardboard 9 halves of library pockets 1 whole library pocket 9 - 3" circles with numerals 1-9
Procedure:	Draw an equilateral triangle in the center of the cardboard. Arrange the halves around the triangle as shown. Place numeral circles in whole library pocket.
Instructions:	Pupil chooses a numeral circle from the whole pocket and places it anywhere aound the triangle. The object of the activity is to place the numerals in a position that will make each side = 20.



* Magic sum may be changed by making a new set of necessary numeral circles.

TURTLE TOSS
(sets)

Number of Players: 4 players

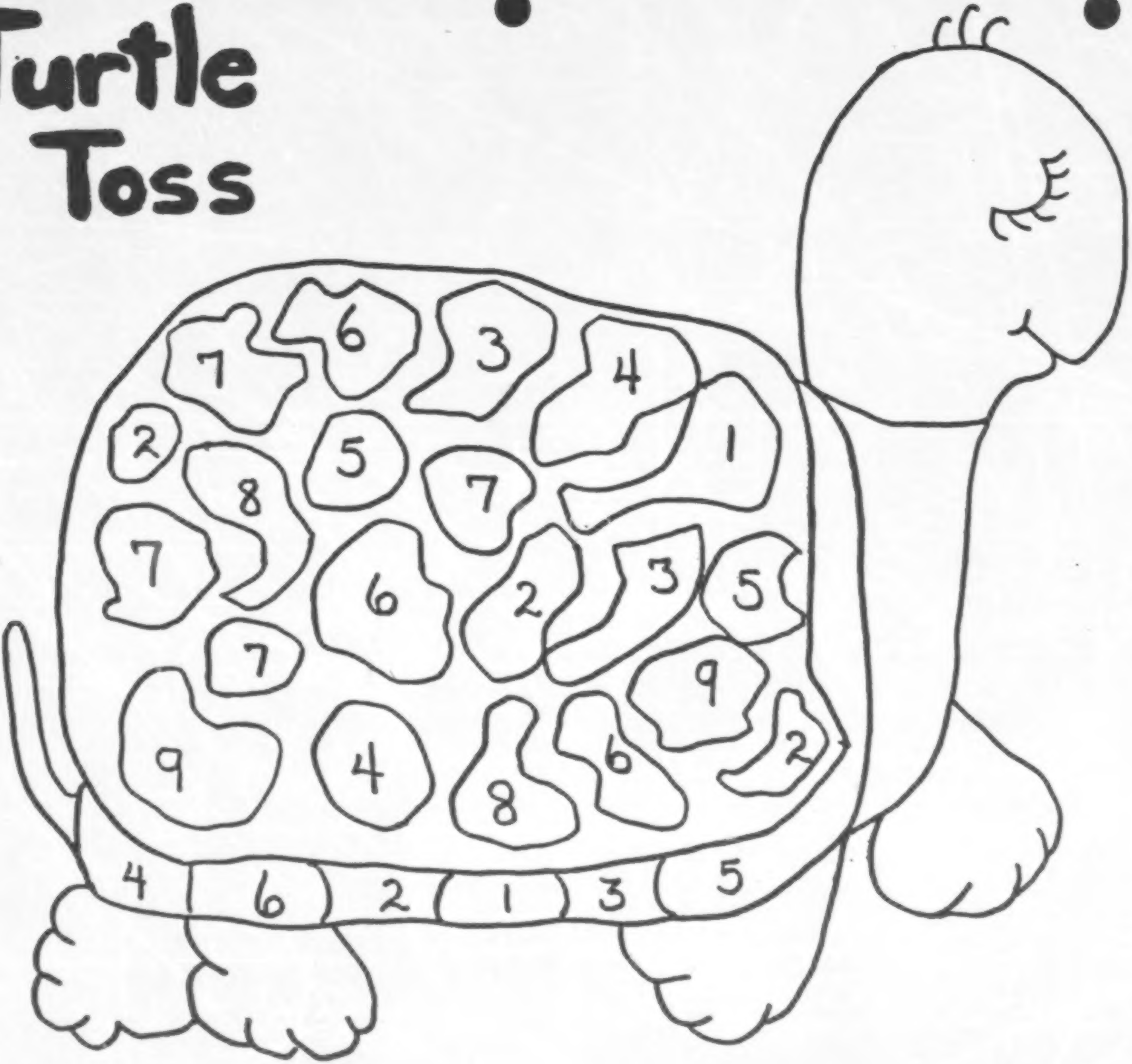
Materials: 2 quiet counters or 2 pennies

Procedure: Player #1 tosses the pennies on the turtle. He then adds the 2 sets together and tells the number sentence. (2 and 3 is another name for 5.) If the other children agree, the player may take a token.

Player #2 has a turn; play continues until all four players have had a turn. They need to have 3 turns and then count their coutners. The one with the most is the first winner; the next most is the next winner, etc.

Note: This can be used for set recognition -- (use one penny), numeral recognition (use numbers instead of sets). The game can also be used for separating sets. The child says, "8 - 1 = 7."

Turtle Toss


7
6
3
4
1
2
5
8
7
7
6
2
3
5
7
9
9
4
8
6
2
4
6
2
1
3
5

TWINKS

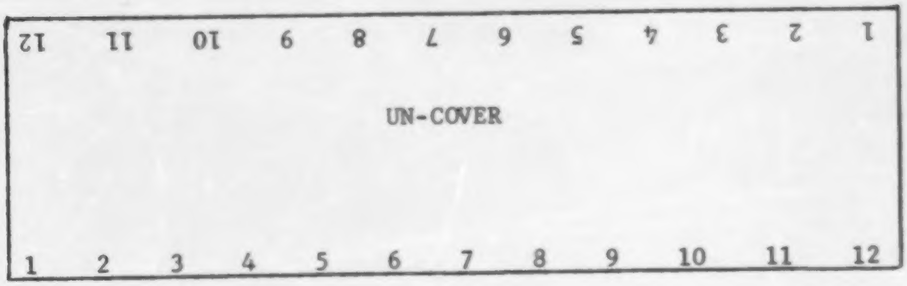
Materials: Deck of 60 cards (3" x 5")
Cards numbered 0 - 15
(There will be 4 sets)

Procedure: Give each player an equal number of cards. They each should place their deck face down in front of them. The first player turns over a card and puts it in the center of the table in front of himself. This play continues similarly for the remaining players. As soon as anyone sees that the sum of the two or more exposed cards equals 15, he calls out "Twinks" and forms a book of the set of cards involved. The cards that were in the center and not used for this set of 15, remain in the center. If, after three turns, no books are made, each player takes back his cards and places them on the bottom of his pile and the game continues. The child with the most books is the winner.

NOTE: The "Twinks" number can be changed by pulling out the unnecessary cards. (e.g., if "9" is used for "Twinks," remove the 10-11-12-13-14- and 15 cards.)

UN-COVER

Materials:	2 - cubes 1 - 8" x 24" piece of tagboard or cardboard 24 - 2" x 3" pieces of construction paper
Procedure:	Make an UN-COVER board as shown in the illustration below. Mark one cube with the numerals 1-2-3-4-5-6 and the other with 6-7-8-9-1-2 or 6-7-8-3-4-5. When the board is finished cover the numerals with the pieces of construction paper.



INSTRUCTIONS FOR UN-COVER

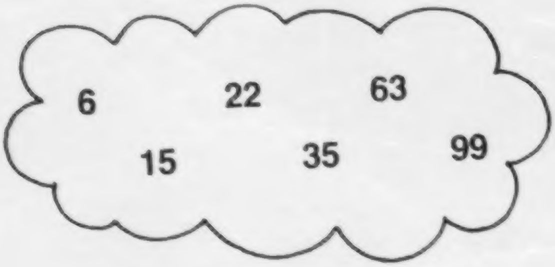
1. The first player rolls the two cubes.
2. The child must compute the sum of the numbers from the top faces of the cubes.
3. The player may then un-cover this number from his side of the board and all other combinations that yield this sum. (e.g. if a sum of eight is rolled, the child could uncover 8, 1 and 7, 2 and 6, 3 and 5.)
4. The second player follows the same procedure.
5. Play continued until one player wins by uncovering all 12 of his numerals.

Subtraction

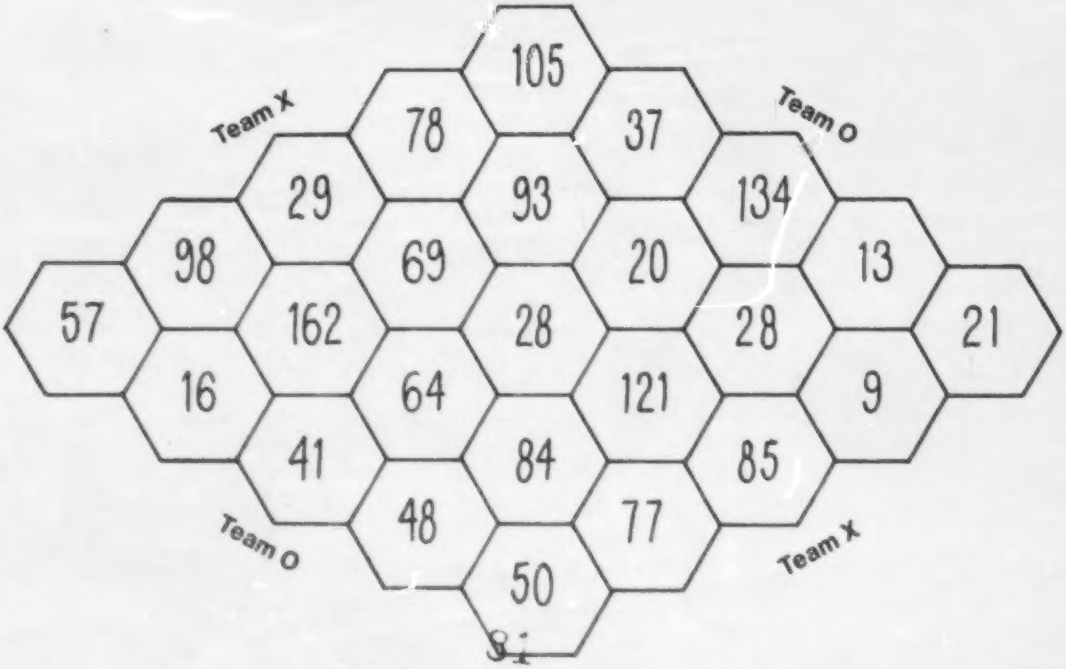
ADDITION - SUBTRACT STRATEGY

(1 and 2 digit with and without regrouping)

Materials:	Posterboard or folder and markers
Procedure:	Draw gameboard on posterboard. See diagram below.
Instructions:	Two teams or two players. The team or players take turns. Each picks any two numbers from the cloud and adds or subtracts the numbers. If the sum or difference is on the gameboard, that team's or player's marker is placed on that sum or difference. If it isn't on the gameboard, the turn is passed to other team or player. The first team or player to get a path of answers connecting its two sides of the game board wins.


6
22
63
15
35
99

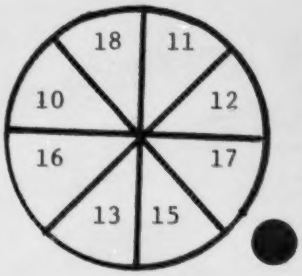
Game Board


105
Team X
78
37
Team O
29
93
134
98
69
20
13
57
162
28
28
21
16
64
121
9
41
84
85
Team O
48
77
Team X
50

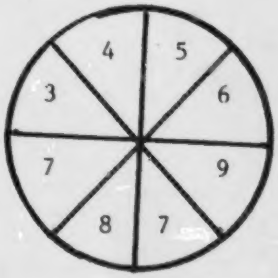
CLASSIC FACTS

Materials:	Folder Spinners Magic Slates Counters Stickers
Procedure:	Draw gameboard on folder and decorate with stickers
Instructions:	First player spins both spinners, subtract smallest number from large number and cover answer. Write answer on slate; keep track of score. Person with most points is winner.

8	8	4	6	7
7	2	6	4	6
3	5	3	5	4
6	5	5	3	8
9	7	3	4	9



2	4	8	8	2
3	9	3	5	3
5	7	2	7	4
7	6	5	9	8
8	9	6	8	7



DOWN FROM 500

Materials:	Set of 40 cards, ten each of digits 0 to 9 score sheets
Instructions:	2 to 5 players Mix the cards and place the deck face down on the table Each player start with a score of 500 Each player draw two cards and makes the lowest number he or she can. The player who can make the lowest number then subtracts the number from his or her score. Play ends when all the cards have been drawn, or when one player's score reaches zero. Winner is player with lowest score at end of game.

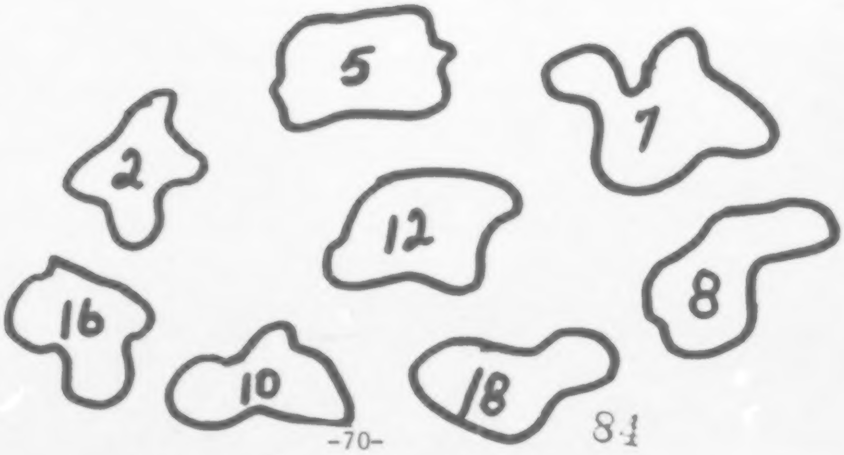
ISLAND HOPPING GAME

Materials:	25" x 25" styrofoam three counting blocks six characters cardboard tagboard

Procedure: Nine or ten clusters of islands, similar to the one in the illustration, are drawn. These clusters are arranged in a circular pattern on the board. The faces of two of the counting cubes are marked with numerals. The faces of the third cube are marked with the symbols + and -. The islands are labeled with numerals that are the possible answers of the problems associated with a roll of the three cubes. The board can be decorated by drawing palm trees, and by painting the ocean blue and the islands green, etc.

Instructions:

1. Two to six students at a time are allowed to play "Island Hopping."
2. The object of the game is for the child to move his playing piece completely around the board, moving from one cluster of islands to another.
3. The child rolls the three cubes. This results in a number problem for him to solve.
4. The child finds the answer to this number problem. He looks at the first cluster of islands. If there is a numbered island that corresponds to this answer, he may move his playing piece to that island. If he cannot find an island in the cluster that corresponds to his answer, he cannot move his piece.
5. On the child's next turn, he throws the cubes and looks at the next cluster of islands to see if he can find an island for his answer. Play continues until someone moves his playing piece completely around the circle.



KNOCK YOUR BLOCK OFF

Materials:	8" x 8" tagboard magic marker deck of problem cards counting blocks
Procedure:	Mark off board into 16 squares. At random, put the answers to subtraction problems in the squares.
Instruction:	Each player is given ten counting blocks of the same color. The first player draws a card and answers the subtraction fact. He then places one of his cubes on the answer to his problem. If his problem is 11 - 8, he places his block on 3. The second player then draws a card. If his card is 15 - 9, he places one of his blocks on 6. When a player draws a problem whose answer is covered by another player's block, the player whose turn it is may remove the other player's block and put his own on the board. The first player to get four blocks in a straight row is the winner. If a player answers his problem incorrectly, he may not put a block on the board.

EXAMPLES:

#1

6	8	3	7
9	7	5	4
2	6	8	5
0	4	9	3

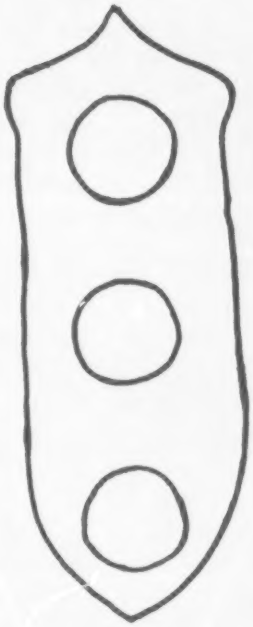
#2

8	9	7	5
6	4	8	6
7	3	2	9
1	5	4	8

RED LIGHT - GREEN LIGHT

Materials: Approximately 40 cards - size 3 x 5
Red, yellow, green magic markers
Pattern for stop light.

Procedure: Place regrouping problems on the cards--decorate with stop light pattern. Make pairs of cards, i.e.:



STOP--Ones to Tens (addition)

321 239
+329 +643

STOP--Tens to Hundreds (+)

565 374
+254 +374

STOP--Ones, Tens, Hundreds (+)

476 247
+386 +195

GO (+)

456 271
+543 +526

STOP--Tens to Ones (Subtraction)

876 768
-547 -249

STOP--Hundreds to Tens (-)

659 868
-461 -187

STOP--Ones, Tens, Hundreds (-)

524 425
-295 -196

GO (-)

884 472
-563 -331

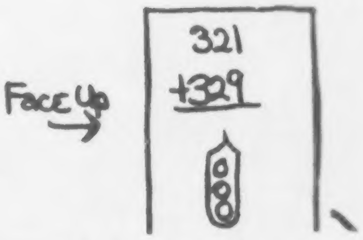
(On the back of the cards--key the operation and the type of regrouping if any, that is needed as the example shows below.)

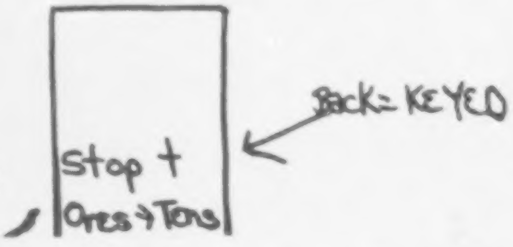
PLAYING INSTRUCTIONS FOR RED LIGHT - GREEN LIGHT

Cards are stacked in the center of the playing area. Each pupil in turn takes a card face up. He lays the card in front of him. Play continues until someone sees a pair that match in operation AND in the type of regrouping required. He books the two cards and says RED LIGHT if it is a regrouping problem; GREEN LIGHT if it does not require regrouping. He must ALSO state the operation and the type of regrouping required. (in green light--only the operation is necessary)

The winner is the person at the end of the game who has correctly "booked" the most cards.

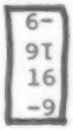
Players may challenge a "book" by looking at the key on the back. Any cards that do not match are put back at the bottom of the deck.





ROCK & ROLL

Materials:	fact cards 2"x3" 1 cube baggie for storage
Procedure:	mark the cube with 4, 5, 6, 7, 8, 9 (use facts 10-18) or + facts 10-18 for 2 players



Directions:

Place 6 cards face up on the table. First player rolls the cube. Both players see who can find the cards that have the answer shown on the cube. When acards are taken those cards are replaced from the deck. Player with the most cards is the winner.

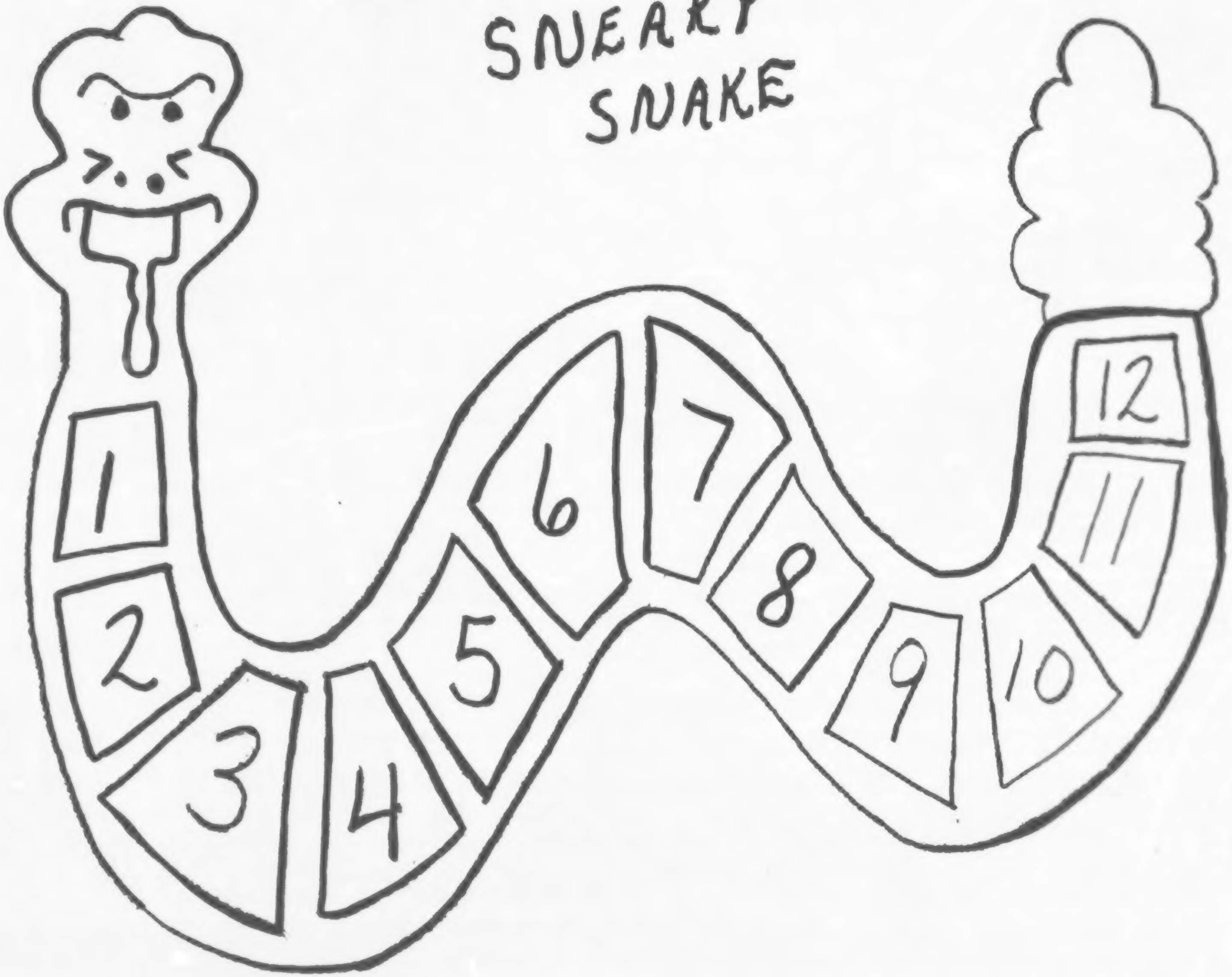
Variation: Activity may also be used for practice of division facts.

$6\overline{)24}$ cube 4,5,6,7,8,9

SNEAKY SNAKE

Materials:	Pattern for Snake Four pieces of posterboard 8" x 10" Magic markers Counters Two cubes number 1 - 6
Instructions:	Draw snake on each gameboard and write numerals 1 - 12 on snake. Write numerals 1 - 6 on each cube.
Directions:	First player rolls cubes and adds the numbers or he may choose to subtract small number from large. He then covers the answer with a quiet counter. Play continues until all answers are covered. First player to cover all answers is winner.

SNEAKY SNAKE


1
2
3
4
5
6
7
8
9
10
11
12

SUBTRACTION RING

Materials:
1 - 10" x 10" piece of railroad board or tagboard
20 - 2" x 2" pieces of tagboard

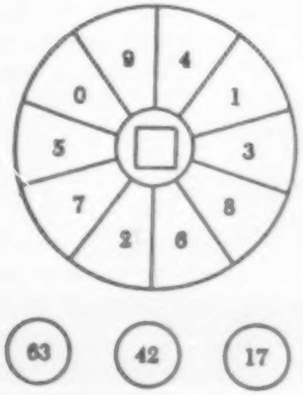
Procedures:

1. Make a subtraction ring with an eight-inch diameter from a piece of railroad board. Mark a circle with a two-inch diameter in the center of the ring. Separate the ring into ten sections and mark each with a numeral 0 through 9.
2. Cut twenty (20) or more circles with two-inch diameters from oaktag. Mark each of these with one the numerals 10 through 99.
3. Key so players can check their answers.
4. Small box for numeral cards.

Instructions:

1. Put the numeral cards face down in a small box.
2. Each player draws a numeral card. The one with the larger number plays first.
3. The first player puts his numeral card in the center of the subtraction ring. Then he subtracts each number of the ring from the number in the center. (The other player can use the key to check answers if necessary.) If he gives all ten answers correctly he keeps the numeral card. Otherwise, he returns it to the box.
4. Play continues with players alternately drawing numeral cards and doing the subtraction until all the cards have been used or a set amount of time has passed.
5. The winner is the player who has collected the most numeral cards.

Variations: Have players add the numbers on the ring to the numeral in the center instead of subtracting them.



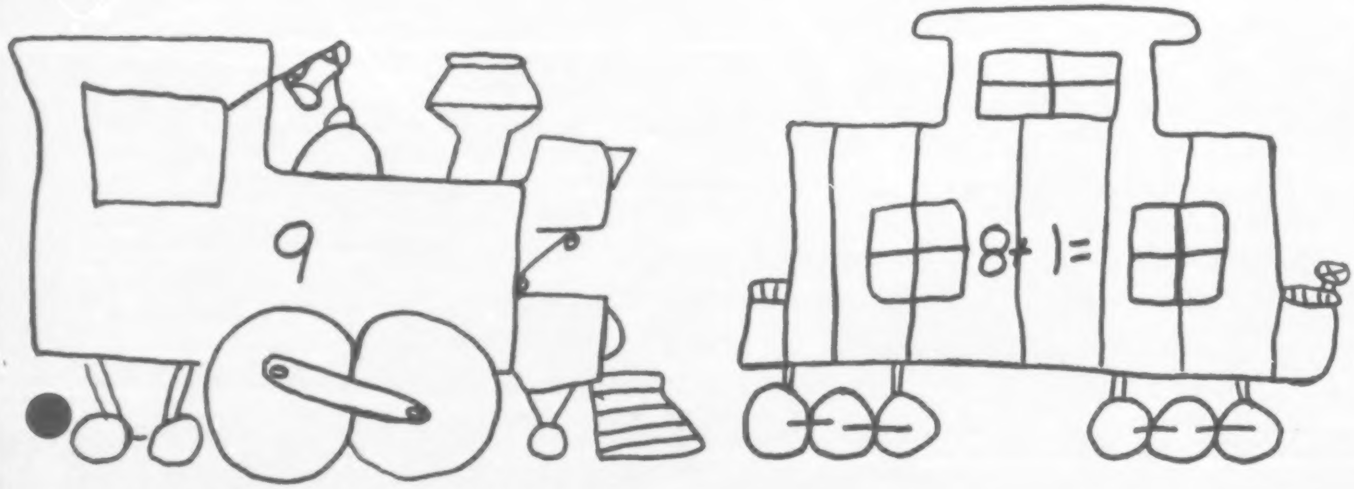
SUBTRACTION TRAIN

Materials and Procedure: Make ten train engines from tagboard. Mark them with the numerals 0-9, one numeral to an engine. Make train cars that have basic subtraction combinations on them. There are ten combinations of 0, ten for 1, through ten for 9. All together there are one hundred combinations. Put pieces of magnetic tape on the back of each engine and car. Draw a train track on a magnetic board. Have a subtraction table available so players can check answers during the game.

Instructions:

1. Mix the engines and put them face down. Put the cars face up and mixed near the magnetic board.
2. One player turns over an engine card and puts it at the end of the track.
3. The second player picks out all the cars he thinks belong with the engine because their subtraction combinations equal the numbers on the engine and puts them behind it on the track.
4. Both players check the train to see if the right combinations have been put on. The second player removes all correct cars and keeps them. The players put incorrectly placed cars back to be used again.
5. The winner is the player who has collected the most cars.

e.g.

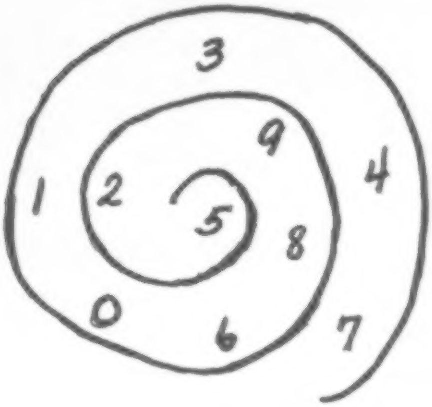


Multiplication

BEAT-THE-CLOCK #2

Materials: Chalkboard

Procedure: Draw a spiral, as shown below, with numbers 0-9 placed randomly in the pathway.



INSTRUCTIONS FOR BEAT-THE-CLOCK #2 GAME

1. The children are told that the object of the contest is to see who can get to the center of the spiral first.
2. One child at a time starts at the arrow and moves through the spiral multiplying or adding each number he comes to by a number that the teacher has given him (e.g., three).
3. Time each child in seconds.
4. Declare a winner after six students have had a turn.
5. A contest between the winners can be held at the end of the period to determine the grand winner.

BREAK IT UP

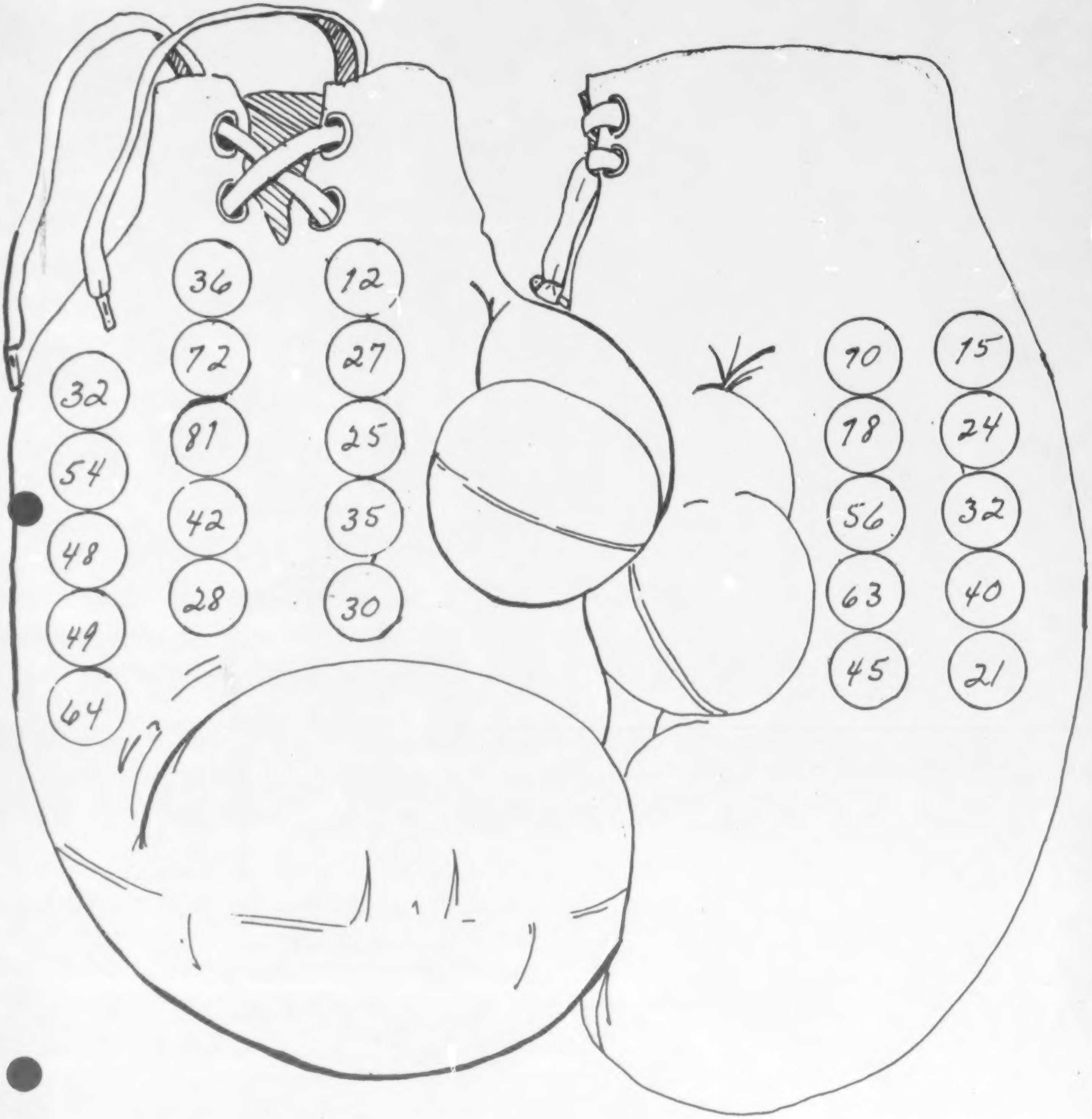
Materials:

5 sets of numeral cards (0-9)
gameboard
2 cubes labeled 1-6, 4-9
colored chips for each player

Instructions:

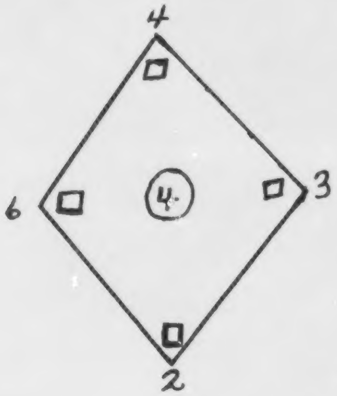
1. Deal each player 6 cards
2. Use 1 cube
3. Player who rolls highest number is the first player
4. If player has the 2 factors in his/her hand he or she may cover the anser on the gameboard and discard those two cards. Player then receives 2 more cards.
5. At the end of play each player adss the numerals under their chips. Person with the most points is the winner.

BREAK IT UP


36
72
81
42
28
12
27
25
35
30
32
54
48
49
64
70
78
56
63
45
15
24
32
40
21

CHALKBOARD BASEBALL

Materials:	Chalkboard
Procedure:	Draw a model of a baseball diamond on the chalkboard (see below). Place one number at each base. Place a number that will serve as a multiplier in the pitcher's box.



INSTRUCTIONS FOR CHALKBOARD BASEBALL GAME

1. Divide the class into two teams.
2. Choose a team captain for each team.
3. The team captain chooses a member of his team to multiply the factor in the pitcher's box by the factor at each base.
4. If this person gives four successive correct answers, he scores a run for his team.
5. The captain then changes the factors at each base and chooses another student to try.
6. Whenever a student misses, his team is "out", and the other team gets to play.
7. The winner is the team that scores the most runs.

NOTE: Change the multiplier frequently or use an addend for the pitcher's box.

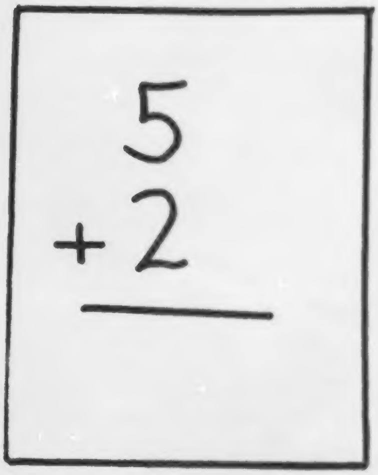
COULD BE

Materials: 4" x 6" pieces of tagboard
watercolor magic marker

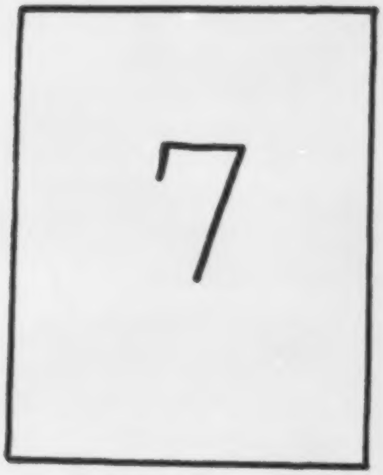
Procedure: On one side of the card write an addition or multiplication fact. On the other side its answer. (see illustration below)

Instructions:

1. Use teams or individual play.
2. Expose the answer (reverse side) to the children.
3. Children verbalize possible problems for the answer.
4. The child that verbalizes the correct fact receives the card.
5. The child at the end of the game with the most cards is the winner.



front

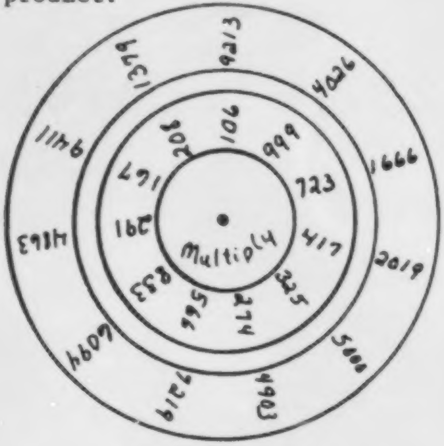


back

DIAL-A-PRODUCT

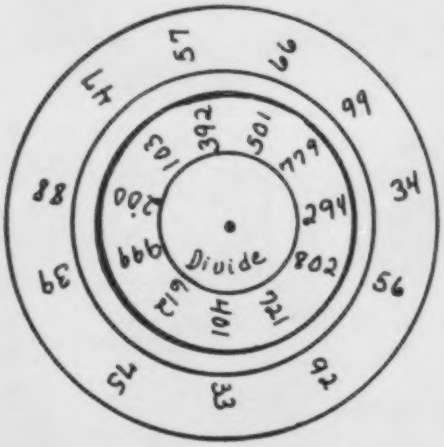
Materials: cardboard
round head paper fastener

Procedure: Cut 2 cardboard circles having different radii.
Punch a hole in the center of each circle.
On the outer edge of each circle, write the numbers that you want your students to multiply.
Attach the two circles together using a round head paper fastener, spindle or peg.
Write the number that pair up on a sheet of paper and find their product.


9213
4026
1666
2019
5000
4903
7219
6094
4163
9411
1379
106
999
723
417
325
274
566
833
291
167
208
Multiply

DIAL-A-QUOTIENT

Procedure: The same as above but divide the numbers that pair up.

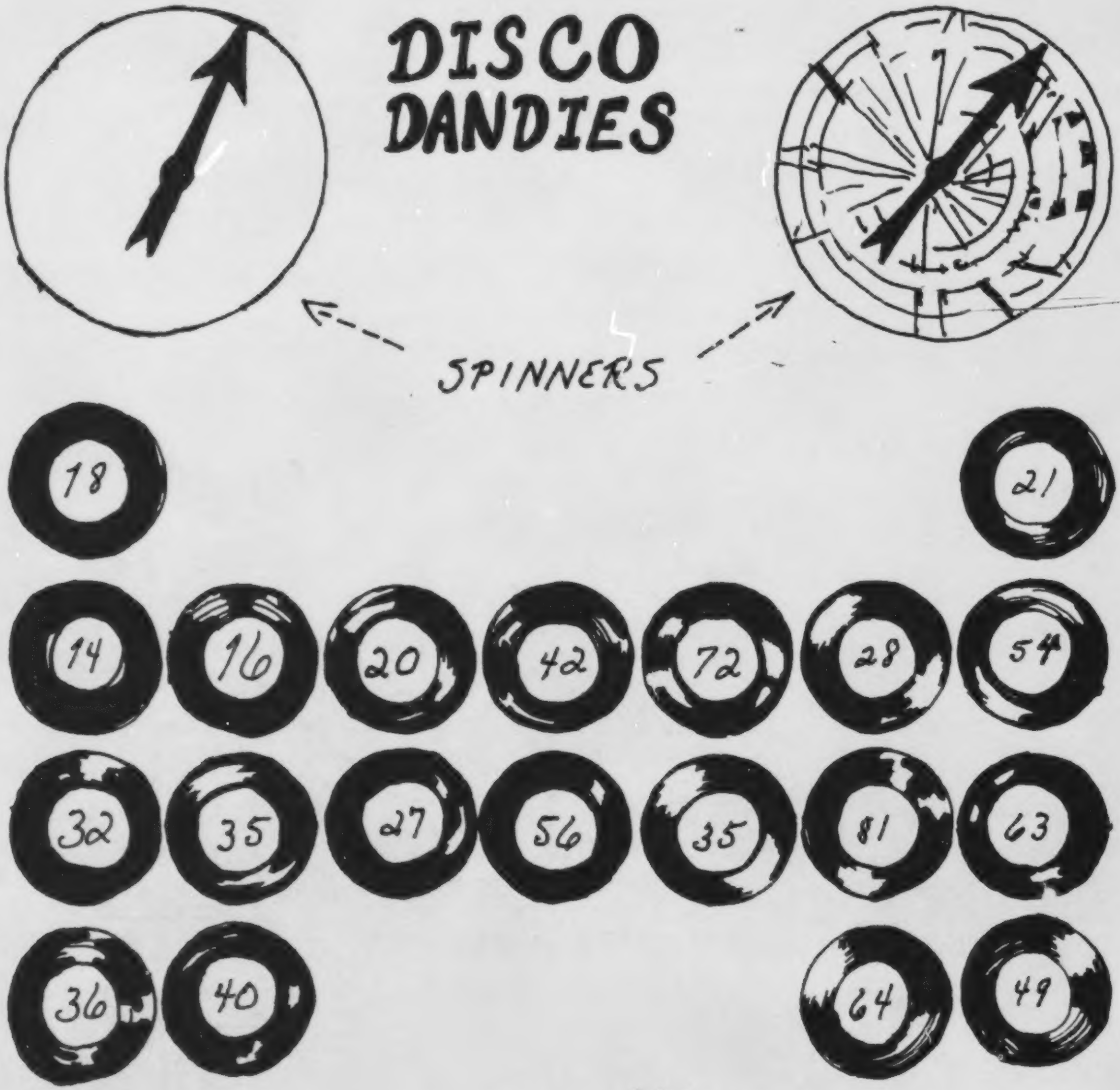

57
96
99
34
56
92
33
75
39
88
47
392
501
779
294
802
721
401
612
999
200
103
Divide

DISCO DANDIES

Materials: spinners (2-7, 4-9)
gameboard (see illustration)
colored chips for each player

Directions:

Players each spin to see who gets the highest number. This person is the first player. Player then spins both spinners, states the multiplication sentence and covers the answer on the gameboard. Next player does the same but may cover the answer only if it touches an answer already covered. The winner is the player who has the most chips on the board.


DISCO
DANDIES
SPINNERS
18
21
14
16
20
42
72
28
54
32
35
27
56
35
81
63
36
40
64
49

HIGH ROLLERS

Materials:

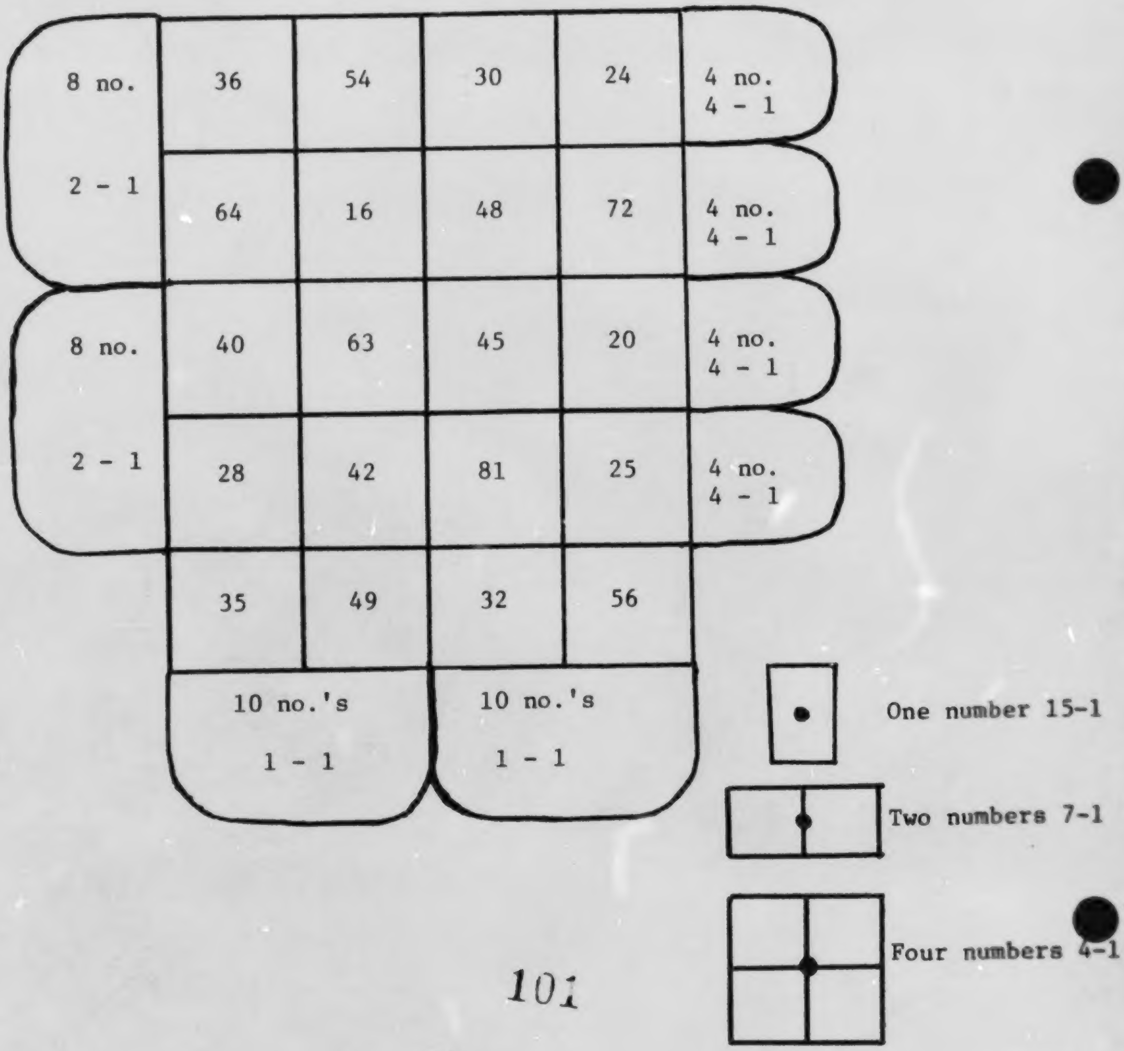
- Poster board
- Magic markers
- Poker chips
- 1 set of die with numbers 4-9 on them

Procedure: Construct a game board as shown

Instructions: Each student places a chip on a number that he thinks might come up as an answer. He can cover one number, two, four, eight, or ten numbers. The "pay off" rate is shown.

Example: Student #1 covers only the number 35. Student #2 covers four numbers (including 35) and student #3 does not cover 35. If 35 is the answer, student #1 gets 15 chips; #2 gets 4; and #3 has to pay one.

The student with the most chips at the end wins.



8 no. 2 - 1	36	54	30	24	4 no. 4 - 1
	64	16	48	72	4 no. 4 - 1
8 no. 2 - 1	40	63	45	20	4 no. 4 - 1
	28	42	81	25	4 no. 4 - 1
	35	49	32	56	
	10 no.'s 1 - 1		10 no.'s 1 - 1		

101

KNOCK YOUR BLOCK OFF

Materials: 10" x 10" piece of styrofoam or tag board
magic marker
2 cubes , from 4 -9
counting blocks

Procedure: Mark off board into 20 squares. At random, put the answers to multiplication problems ranging from 4 x 4 to 9 x 9 in the squares. Using 36 only once, there are 20 answers.

Instructions: Each player is given ten counting blocks of the same color. The first player rolls the two cubes and multiples the numbers together. He then places one of his cubes on the answer to his problem. If his problem is 6 x 6, he places his block on 36. The second player then rolls the cubes. He rolls 5 x 4, and places one of his blocks on 20. When a player rolls a problem whose answer is covered by another player's block, the player whose turn it is may remove the other player's block and put his own on the board. The first player to get four blocks in a straight row is the winner. If a player answers his problem incorrectly, he may not put a block on the board.

10"

10"

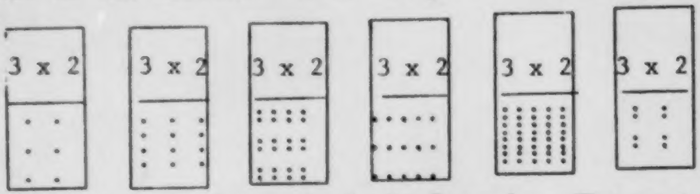
20	42	12	10	16
49	25	36	12	18
24	40	21	15	8
30	14	6	28	35

MULTIPLICATION DOMINOES

Materials: Posterboard or cardstock

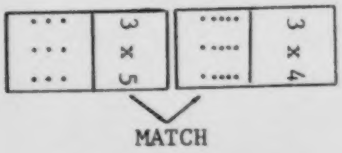
Procedure: Make 81 cards and divide in half with a line (i.e. dominoe). Write facts in one section. Make arrays in the other section.

Example:



Instructions: 2 to 4 players. Each player is dealt 7 cards. The rest become the boneyard. The players decide who will start the play. That player chosses a dominoe card and lays it on the table. Each player in turn draws a dominoe card from the boneyard and tries to play from his hand. The player may play if he/she can match a card to one on the table. Match is made by placing the correct array and fact together. The first person to play all the cards from his/her hand is the winner.

To play, match array to fact as per example.



MULTIPLICATION STRATEGY

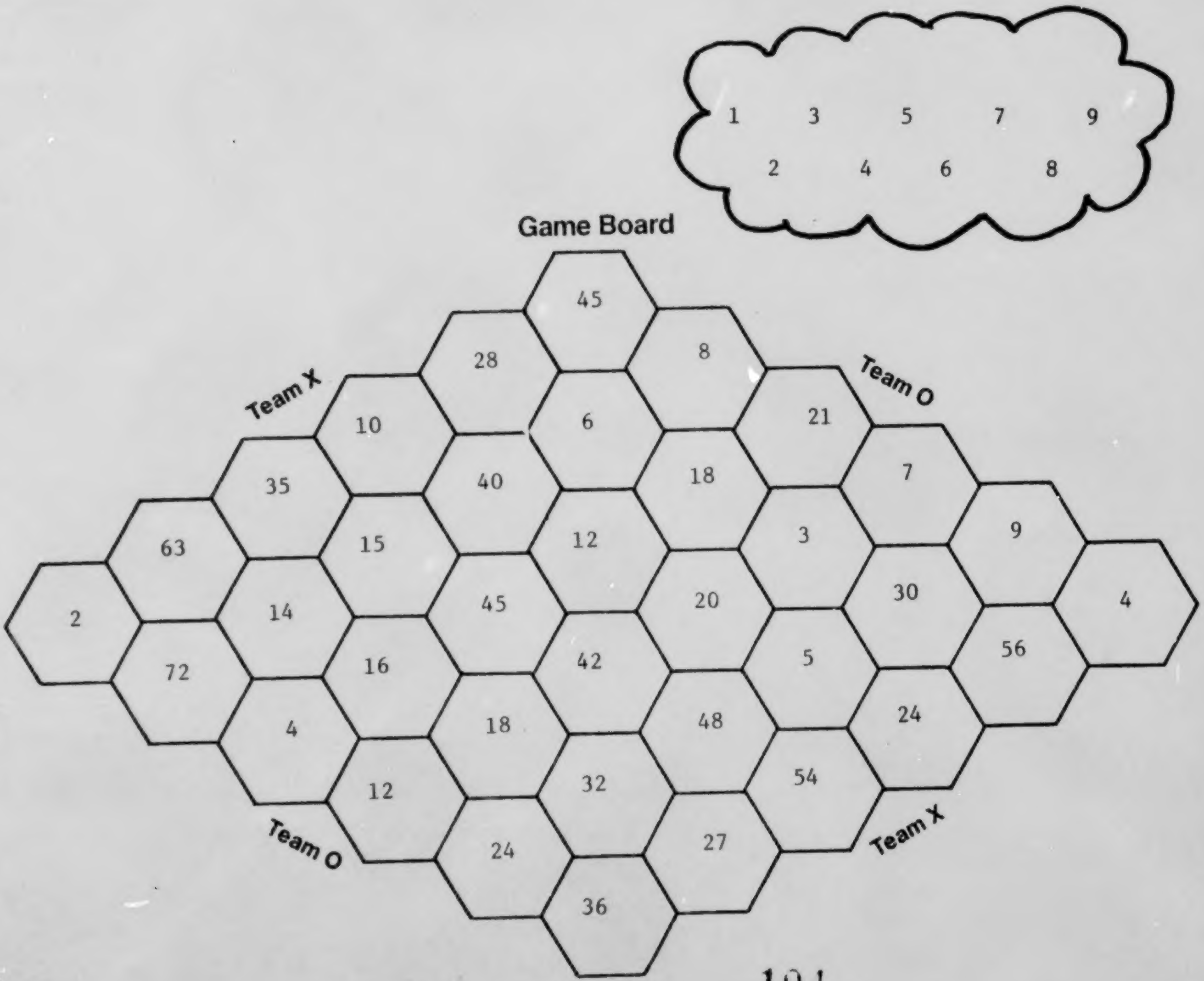
(Facts through 9 x 9)

Materials:	posterboard or folder markers
Procedure:	Draw gameboard on posterboard (see diagram)

Instructions:

1. Two teams or two players - The teams or players take turns.
2. Each picks any two numbers from the cloud, multiplies them together, and finds the product on the game board.
3. The player places his/her marker on the correct product.
4. The first team (player) to get a path of answers connecting its two sides of the game board wins.

Diagram:


1 3 5 7 9
2 4 6 8
Game Board
45
28 8
Team X
10 6 21
Team O
35 40 18 7
63 15 12 3 9
2 14 45 20 30 4
72 16 42 5 56
4 18 48 24
12 32 54
Team O
24 27
Team X
36

MULTIPLICATION STRATEGY

(two digit)

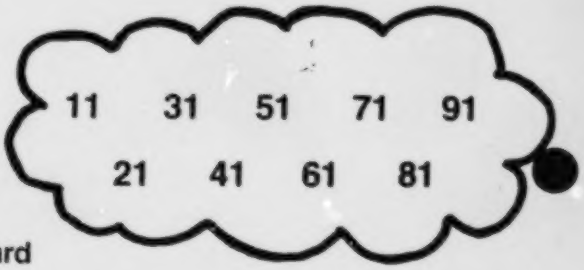
Materials: posterboard or folder
markers

Procedure: Draw gameboard on posterboard (see diagram)

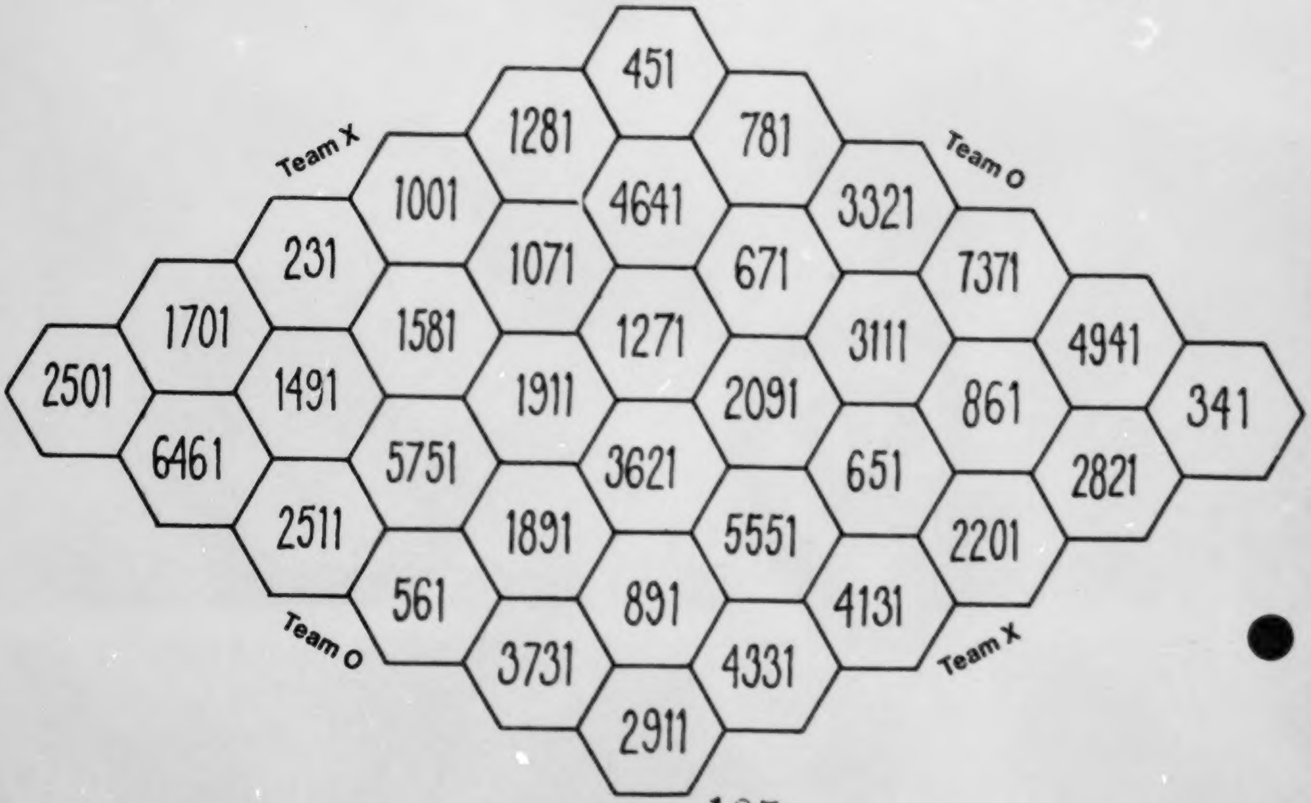
Instructions:

1. Two teams or two players - The teams or players take turns.
2. Each picks any two numbers from the cloud,
   multiplies them together,
   and finds the product on the game board.
3. The player places his/her marker on the correct product.
4. The first team (player) to get a path of answers
   connecting its two sides of the game board wins.

Diagram:


11
31
51
71
91
21
41
61
81

Game Board


451
1281
781
Team X
Team O
1001
4641
3321
231
1071
671
7371
1701
1581
1271
3111
4941
2501
1491
1911
2091
861
341
6461
5751
3621
651
2821
2511
1891
5551
2201
561
891
4131
Team O
Team X
3731
4331
2911

NOW YOU SEE IT

Materials: Gameboard - 25" x 25"
Flashcards
Chalkboard

Procedure: Make gameboard with multiplication answers and flashcards to match gameboard.

Instructions: Have teacher place gameboard in front of students. Hold flashcard up and first student to locate answer raises hand. They will call out the row and position answer is in. He adds the row and position number together. Teacher places this under the childs name on chalkboard. Student with most points at end of game is winner.

	1	2	3	4	5
1	16	12	9	6	36
2	15	24	56	63	81
3	21	42	30	25	20
4	36	40	45	48	54
5	18	10	8	6	4

ROCK STAR

Materials: four different colored sets of markers (13 per set)
3 game cubes
gameboard

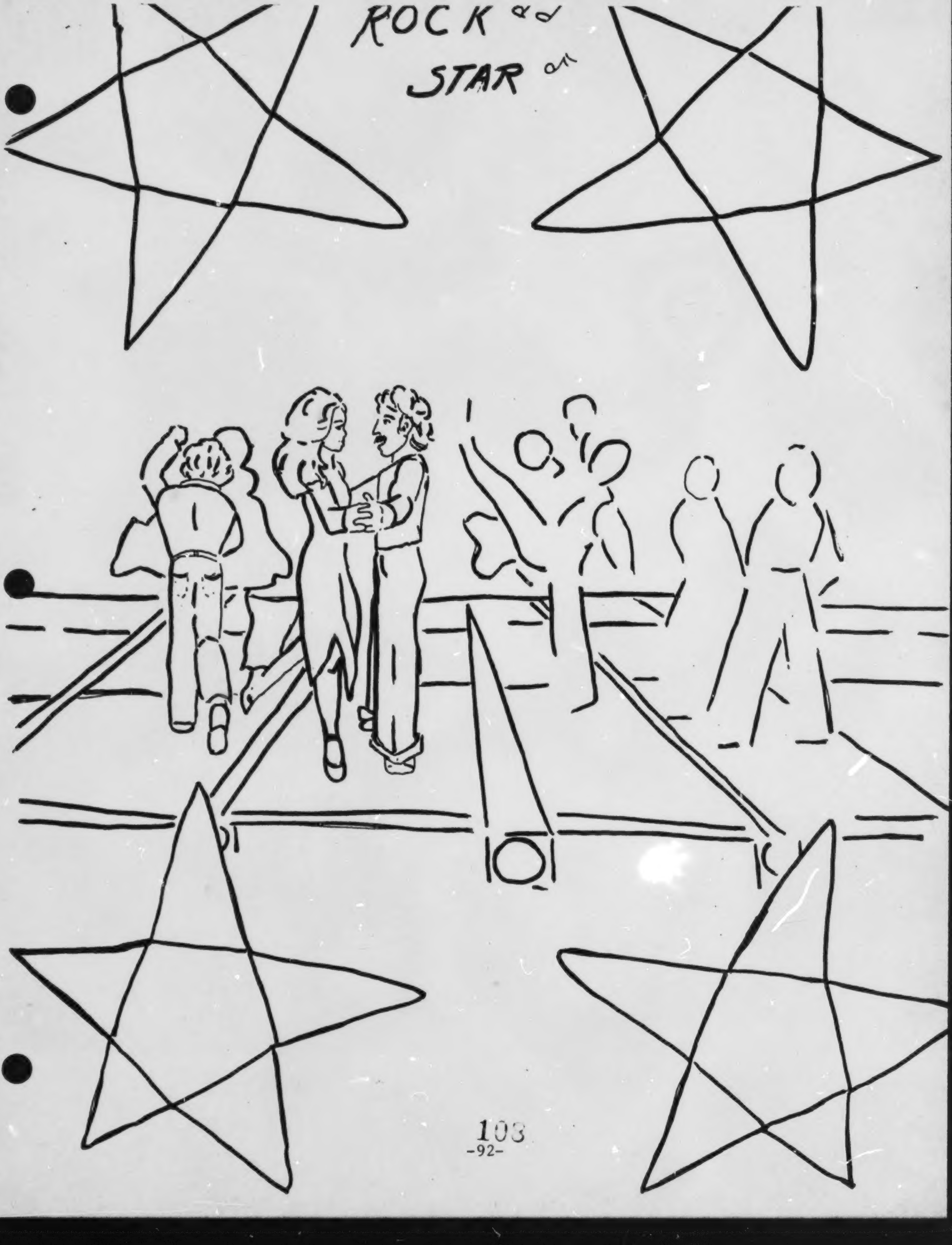
Procedure: Game Board
1 cube 3-8 in black
1 cube 3-8 in red
1 cube 3 10's, 3 100's in red

Instructions:

1. Roll the black cube to see who begins. The player with the lowest number plays first.
2. Take turns rolling all three game cubes.
3. Multiply the black number by each of the red numbers and then add the two products together.
4. As you multiply and add, say the equation aloud.
5. Place one of your markers over the answer.

Example: If you roll a black 6, a red 7, and red 100, your answer is 642. (because (6 x 7) + (6 x 100) = 42 + 600 = 642) You place one of your markers on 642. If the answer has already been covered, you may "bump" off that chip and place it anywhere on the gameboard. The first player to place four markers in one webb is the winner.

ROCK STAR

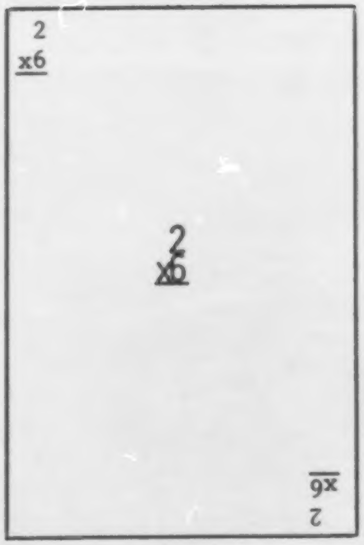


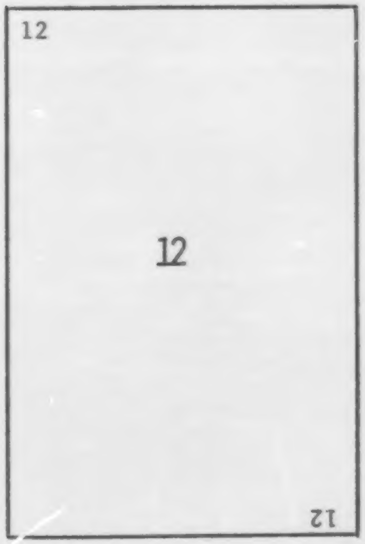
RUMMY--MULTIPLICATION

Materials: 54 - 2" x 3" pieces of tagboard

Procedure: Make 27 problem cards and 27 matching answer cards. (see illustration below)

Instructions: Deal out 6 cards to each pupil. The remaining cards are then placed face down in the center of the table. The first player makes as many books as possible from his hand. He then draws a card from the deck in the center of the table. He must discard one of his cards face up next to the center deck. The next player has the option of picking up this exposed card or drawing a card from the center deck. He makes as many books as possible. The play continues until one pupil has made books of all of his cards. He is the winner.

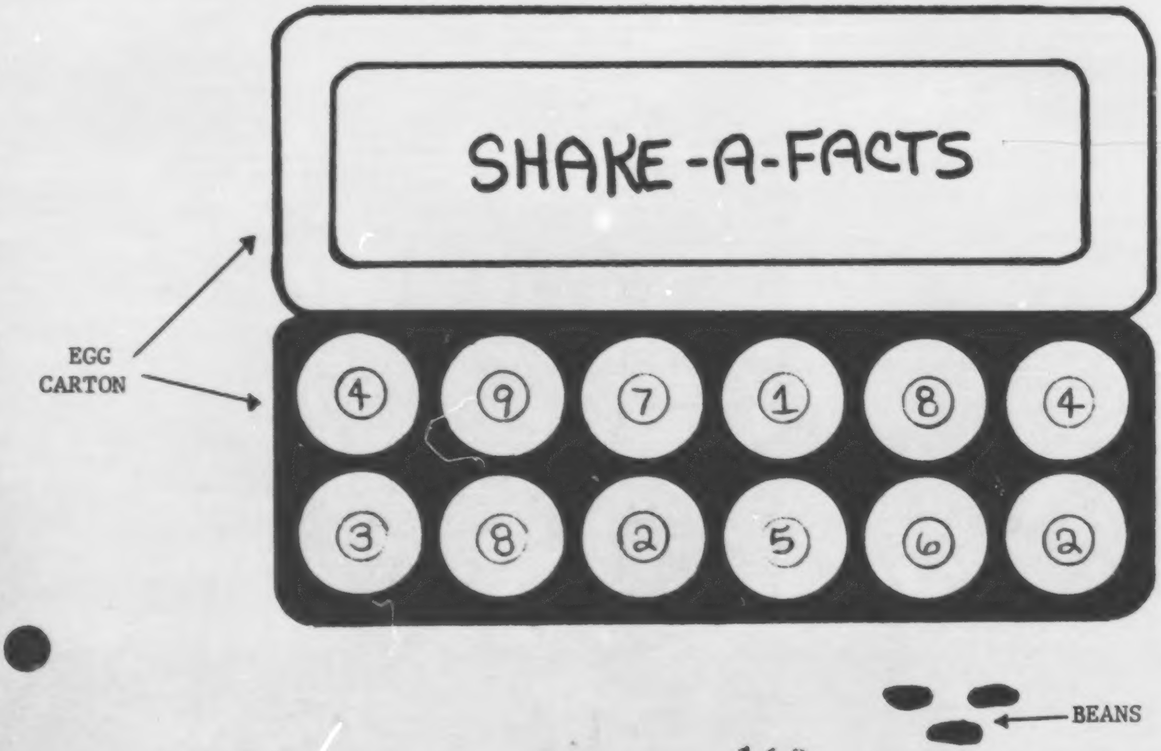




SHAKE-A-FACT

Materials:	Egg cartons (1 for each child) 3 beans (for each child) Scratch paper Pencils
Procedure:	Write a numeral (1 - 9) in each section of the egg carton with a magic marker. Write the following instructions on the top of the egg carton lid. a) Close lid; b) Shake carton; c) Record on the scratch paper the numerals where beans have landed.
Instructions:	The child should place 3 beans in the egg carton. He should then close the lid of the carton and shake it vigorously. The beans will fall into various compartments. The child should open the lid and record the numbers on the bottom of the compartments where the beans have landed. The child must then find the sum of the numbers. See the illustration below.

NOTE: You could use two beans and require the children to add, subtract or multiply the two numbers.



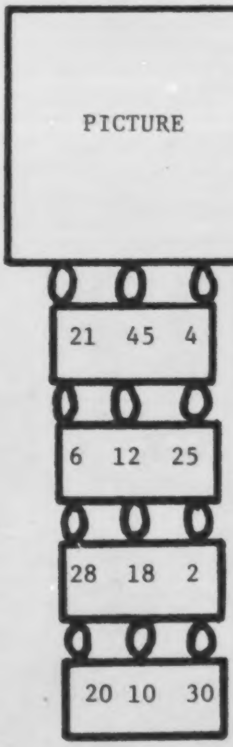
SPINNERIO

Materials:

Loose leaf rings
Strips of cardstock
Choice of decorative picture
Cardstock
Spinner
Brad
Counters

Procedure: Place picture on cardstock - write numerals 0 - 9 on face of picture. Write multiplication fact answers on cardstock strips. Hang from picture by loose leaf rings.

Instruction: Spin the spinner and multiply the two numbers. Cover the answer with quiet counters. First student to cover seven answers on the board is winner. If a fact is answered incorrectly student loses his turn.



3-IN-A-ROW

Materials: color parquetry chips (each player has different color)

Procedure: Make game board as below

Instructiona:

1. Each player in turn, rolls the dice, multiplies the two numbers together, and places a marker on that product on the playing board
2. A player may put his marker on a space already occupied and the space becomes his (it may be used to prevent a player from getting three in a row).
3. The first player to have markers on three products in a row - vertically, horizontally, or diagnonally wins the game.

36	54	35	45	20	30
42	49	24	63	48	56
35	32	16	25	40	28
56	28	64	81	54	42
20	45	30	24	72	36
48	36	40	72	32	63

Division

DIVISION RUMMY

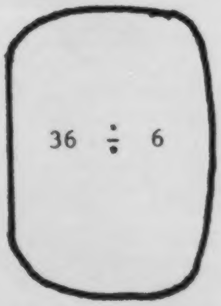
(2-4 Players)

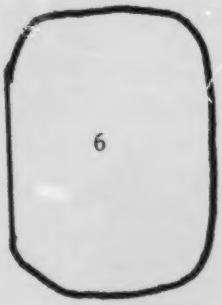
Materials: 48 cards

Procedures: Make a set of twenty-four three-by-five inch cards that contain division combinations. Make another set of twenty-four cards that contain their quotients. Make a key so players can check answers during the game.

Instructions:

1. The dealer shuffles the cards and deals seven to each player. He puts the remaining cards face down to make a draw pile and turns up the top card.
2. Players check their cards for combinations and their quotients. All matching pairs are put face up to form number sentences.
3. The first player draws either the top card or one from the draw pile. If he completes a pair he makes a sentence of them. He discards a card and puts it face up beside the draw pile.
4. Play continues with each player taking his turns in order.
5. When a player wants a card below the top card in the discard pile, he can take it only if he takes all the cards above it, too.
6. Play continues until one player is rid of all of his cards.
7. A point is scored for each sentence a player makes.
8. The winner is the player with the most points after a given number of rounds have been completed.





DIVISION SCRABBLE

Materials:

1 - tagboard 14" x 14"
1 - large sheet of tagboard

Procedure:

Mark off the 14" x 14" tagboard with 2" squares and number them with numerals 3 - 9. Cut out sixty-three 2" tagboard squares. The numerals on the board will be answers and division problems should be marked on the separate tagboard squares to match the answers. For example, since the numeral 4 is found eight times on the board, eight division problems with an answer of 4 should be printed on separate squares. Then make two extra problems for each answer. So, you will have ten squares with an answer of 4.

Instructions:

Separate squares are divided evenly among players. Each player takes turns matching his problem square to an answer square on the board by placing it on that numeral. Only one square may be put down for each turn. Players try to match squares that are adjacent to each other because extra points are obtained this way. The game ends when the board is completely covered with problem squares.

A separate score sheet is marked exactly like the playing board and, after each play, a player initials the square he has just covered. (It is best to mimeograph a lot of these score sheets.) Two points are given for every square covered and five points are given for every adjacent square.

For example: If a player has covered all four numbers on the above square, he receives eight points for covering the four numerals and fifteen extra points for covering three adjacent squares at five points apiece.

This game is easily adaptable to any operation.

DIVISION STRATEGY

(one, two and three digits)

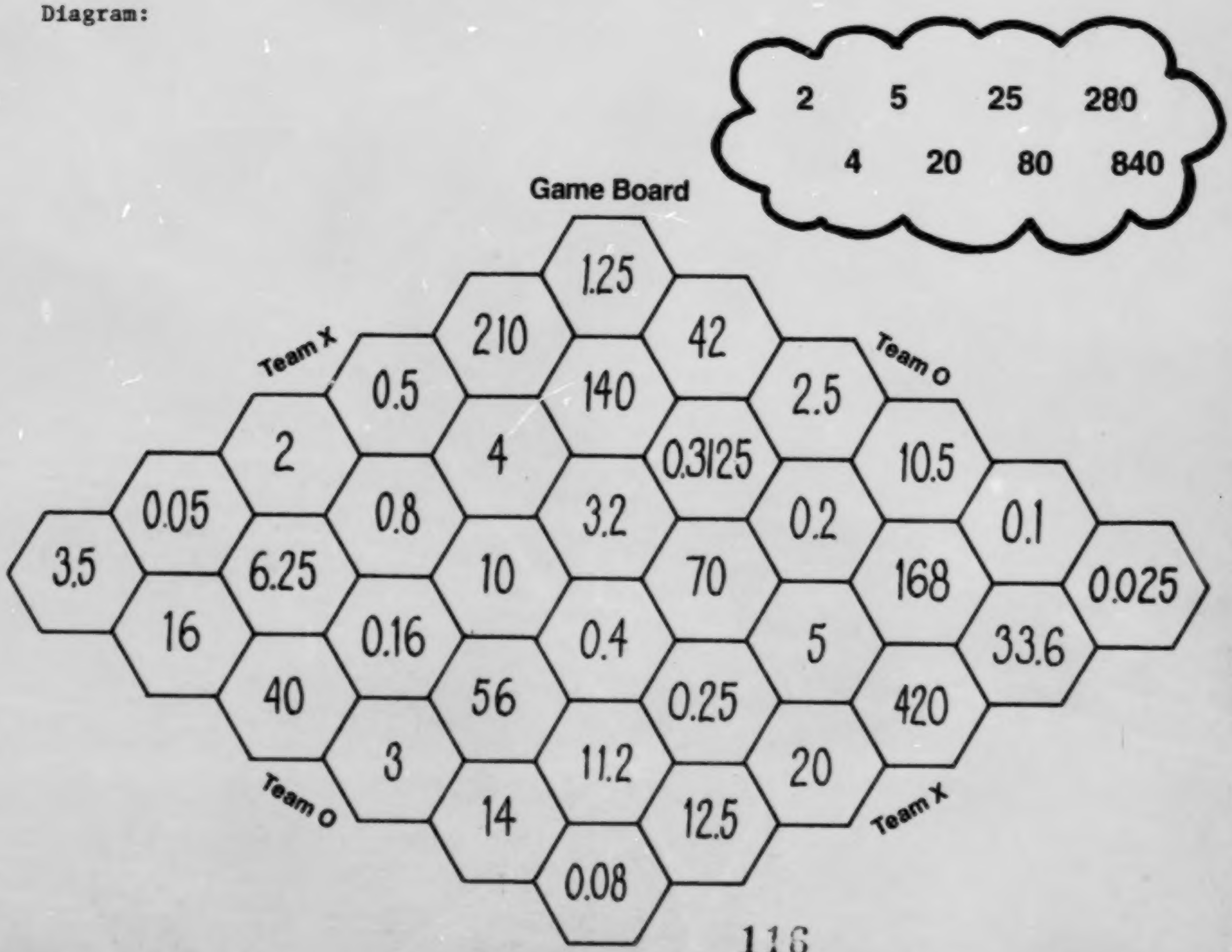
Materials:	posterboard or folder markers
Procedure:	Draw gameboard on posterboard (see diagram)

Instructions:

1. Two teams or two players - The teams or players take turns.
2. Each picks any two numbers from the cloud,
   divides the two numbers,
   and if the quotient is on the game board,,
   that team's or player's marker is placed on
   that quotient.

   If it isn't on the gameboard, the turn is passed
   to other team or player.
3. The first team or player to get a path of answers
   connecting its two sides of the game board wins.

Diagram:


2
5
25
280
4
20
80
840
Game Board
Team X
Team O
Team O
Team X
1.25
210
42
0.5
140
2.5
2
4
0.3125
10.5
0.05
0.8
3.2
0.2
0.1
3.5
6.25
10
70
168
0.025
16
0.16
0.4
5
33.6
40
56
0.25
420
3
11.2
20
14
12.5
0.08

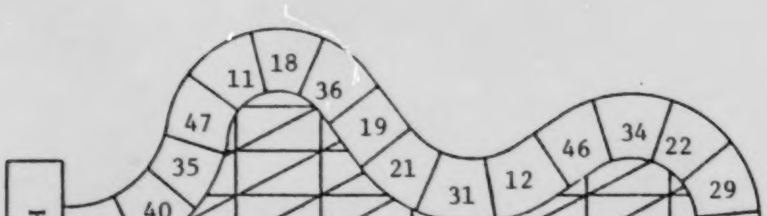
ROLLER COASTER

Materials:	Railroad Board Cards Markers
Procedure:	Make a game board similar to the one pictured on a piece of twenty-two by twenty-eight inch railroad board. Make eight cards shaped like roller coaster cars and write one one the numerals 2, 3, 4,...9 on each. Each player will need a marker.

Instructions:

1. Each player puts his marker in the "start" box. Put the numeral face down in their box on the game board.

2. The first player picks up the top numeral card. He uses it as a divisor for dividing the first number on the board. For example, if the numeral he draws is 7, the division is 48 ÷ 7. The player divides and names the remainder. If he names the correct remainder, he moves his marker the number of spaces named by the remainder along the board.

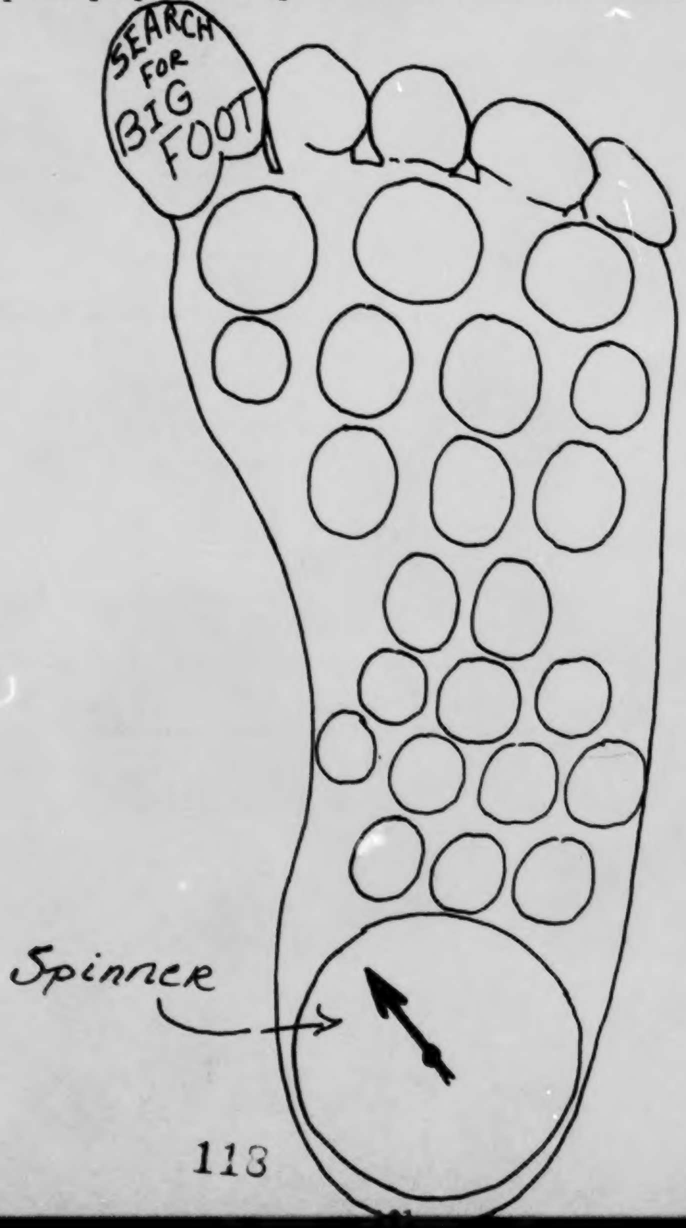

Start
48
12
10
16
23
31
28
19
45
38
13
27
30
34
17
25
31
42
15
33
19
11
21
36
39
44
29
22
34
46
12
31
21
19
36
18
11
47
35
40
13
Home
7
3

SEARCH FOR BIG FOOT

Materials:	gameboard (see illustration) 1 game spinner (labeled 4-9) 45 cards (5 sets 0-9) colored chips for each player

Directions:

Players spin the spinner. Player with the highest number is first. Each player receives 6 cards and the first player rolls the cube. Player uses any numeral on the game board and divides it by the number on the cube. If player has the answer in his or her hand that product on the gameboard may be covered. Player then draws another card. Next player does the same but must cover a product touching one that has been covered. At the end of play all players add up the total under their chips.



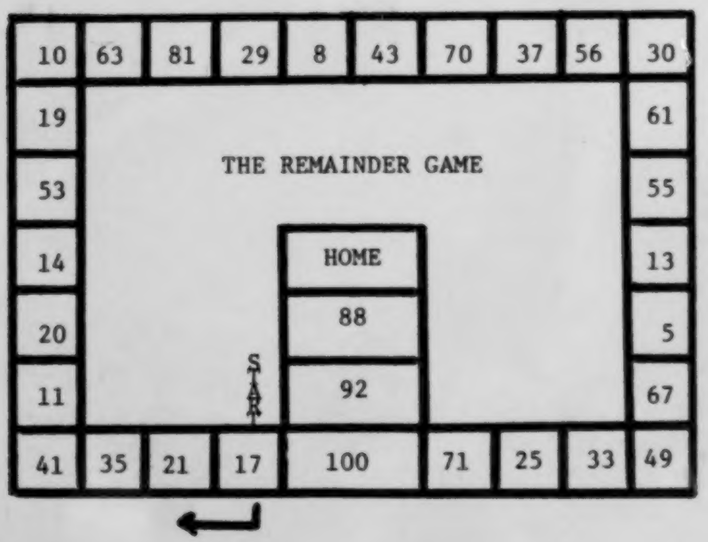
THE REMAINDER GAME

Materials:

game board
marker for each player
24 numeral cards (3 each 2-9)

Instructions:

Two to four players.
Players each draw card to determine who goes first.
Player with the largest numeral starts.
Markers are placed on the starting numeral (17).
The first player draws a card and divides 17 by that numeral.
He moves his marker the number of spaces indicated by the remainder he got.
Play continues with each player drawing a card and moving the number indicated by the remainder.
On the second round each player now draws and divides the new numeral he has landed on by the numeral he has drawn.
If there is no remainder, the player cannot move and loses his turn for that round.
The winner is the first player to get exactly the correct number of spaces to get to HOME.


10
63
81
29
8
43
70
37
56
30
19
61
THE REMAINDER GAME
53
55
HOME
14
13
88
20
5
START
92
11
67
41
35
21
17
100
71
25
33
49

THE SNAKE

Materials:	Dice Paper and pencil Colored discs
Procedure:	First, draw a snake (Use the illustration marked for the numbers 2, 3 and 5.)

Instructions:

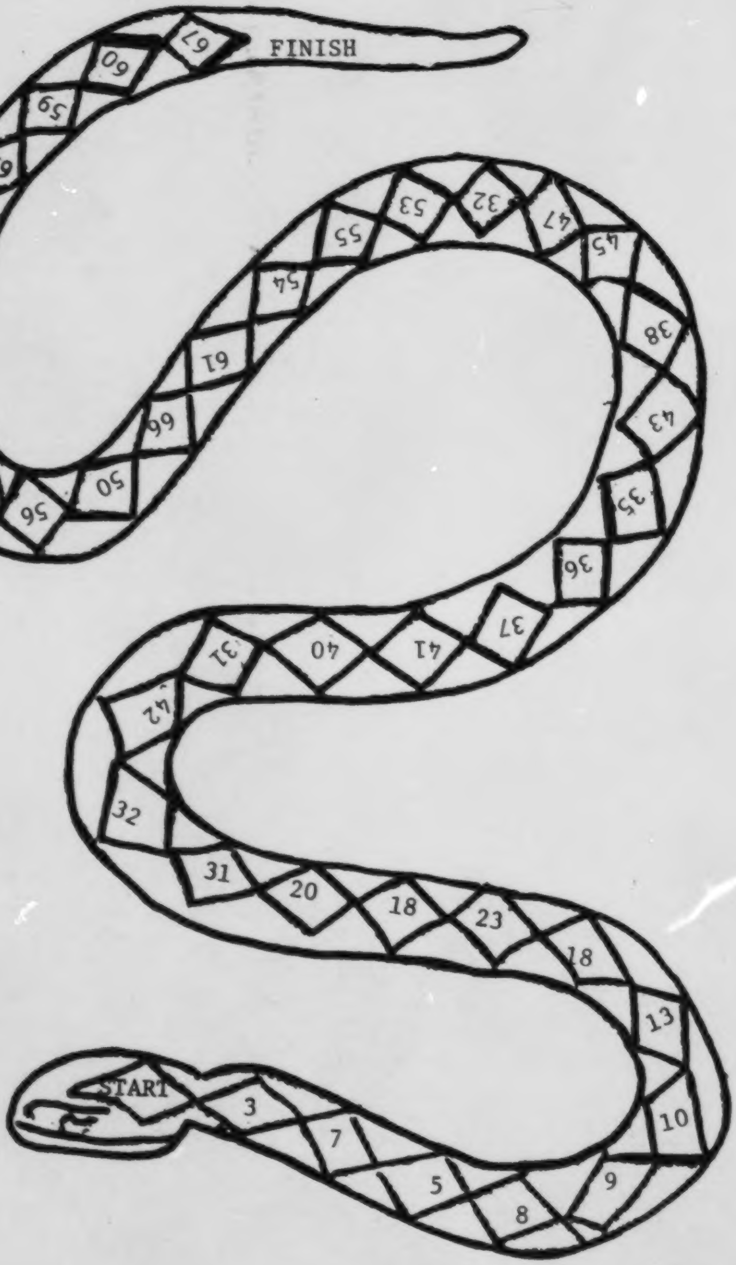
The object of this game is to work your way from the snake's mouth, which is marked START on the accompanying pictures, all the way through his winding body to his tail, which is marked FINISH.

Several discs of three different colors corresponding to these numbers -- say, red for 2, yellow for 3, and green for 5 -- should be thrown into a grab bag. Each player draws one disc. These three numbers will serve as divisors.

The dividends will be the numbers in the sections of the snake's body. Each player, in turn rolls a single die. The number he turns ups is the number of sections he moves along the body of the snake. For example, if the first player rolls a 2, he moves his disc two sections from the START. This will land him in the section marked 7. If he has a red disc which is valued at 2, he finds that 7 is not divisible by 2. He must therefore move back to a section that is a multiple of 2 or go back to the START. In this case, he will have to leave his disc at the starting point. He has made no progress at all.

Suppose that the second player rolls a 6. He moves six sections from the starting point to the number 10. Since he has a yellow disc which is valued at 3, and since 10 is not divisible by 3, he will have to move back to the first section with a multiple of 3; in this case, the first section which contains the number 3.

Continue in this way until one player has reached the FINISH line. He wins the round and scores five points. Fifteen points are needed to win the game.


START
3
7
5
8
9
10
13
18
23
18
20
31
32
42
31
40
41
37
36
35
43
38
45
47
32
53
55
54
61
66
50
56
57
36
50
66
61
59
60
67
FINISH

TAKE 5

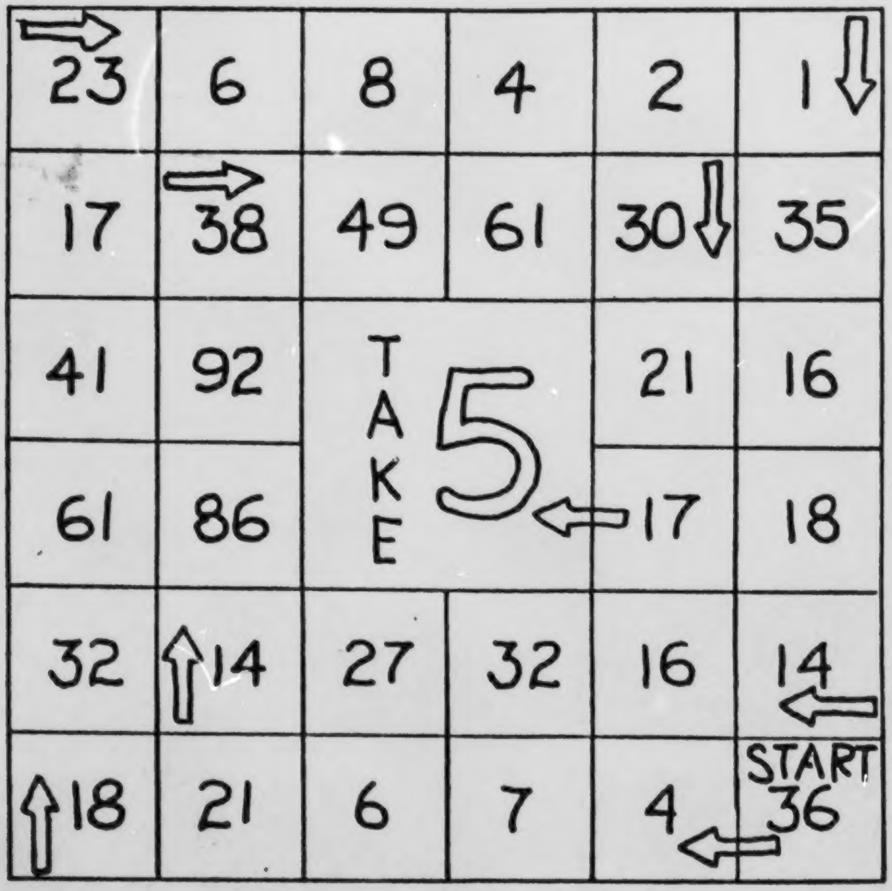
Materials: Game board, markers, die

Instructions: 2 to 4 players. Each player puts a marker on square 36. In turn, each player throws a die. Divide the number you are on by the number on the die. Move the number of spaces corresponding to the remainder.

Example: Suppose you are on 27. Here are the possible moves:

Throw	Move	(Remainder)
1	0	27 ÷ 1 = 27 (remainder 0)
2	1	27 ÷ 2 = 13 (remainder 1)
3	0	27 ÷ 3 = 9 (remainder 0)
4	3	27 ÷ 4 = 6 (remainder 3)
5	2	27 ÷ 5 = 5 (remainder 2)
6	3	27 ÷ 6 = 4 (remainder 3)

The first person to reach the "Take 5" region wins the game.



23	6	8	4	2	1
17	38	49	61	30	35
41	92	TAKE 5		21	16
61	86			17	18
32	14	27	32	16	14
18	21	6	7	4	START 36

ZAP

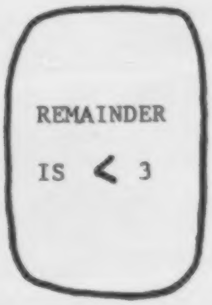
(2-5 Players)

Materials: 60 cards

Procedure: Make a set of sixty 3 x 5 inch cards containing division examples having remainders other than zero. Make sixteen ZAP cards. These cards contain statements such as "Remainder< 4,", "Remainder is an even number", "Remainder is> than 6".

Instructions:

1. The dealer shuffles and deals all the division cards. Each player stacks his, face down. The dealer puts the ZAP cards face down.
2. The dealer turns up the top ZAP card and reads it. The statement on this card guides play during the first round.
3. At a signal from the dealer each player turns up his top card. Players check the turned-up cards to see if any of the remainders match the description on the ZAP card. When there is a match, the first player to say "ZAP" gets all the turned-up cards.
4. The dealer turns up a new ZAP card each time a match is made.
5. Play continues until all players are rid of their cards.
6. The winner is the player who collects the most cards.

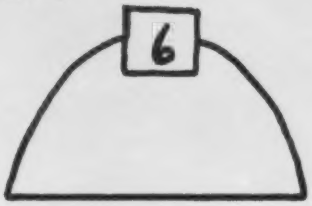


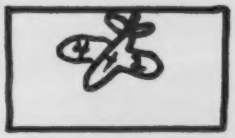
All Operations

AIRPORT MATH

Materials: 3 large oatmeal boxes (or 6 shoe boxes,etc.)
deck of 4" x 6" cards

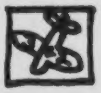
Procedure: Cut the oatmeal box down the middle length wise. Now cut these halves into two equal parts. You should get four airplane hangers per box. Place a numeral card on each hanger. (See illustration below.)





Draw pictures of airplanes on the cards as shown in the above illustration.

INSTRUCTIONS FOR PLAYING AIRPORT MATH

1. Arrange several hangers in a row to resemble an airport.
2. Give each player cards showing airplane problems. (e.g. )
3. When asked to, the student places his airplane problem card in the correct hanger. The card in Step 2 would be placed in hanger #5.
4. Each correct response receives one point. The child or team with the most points is the winner.
5. Adapt to other concepts by changing problems on cards and numbers on hangers

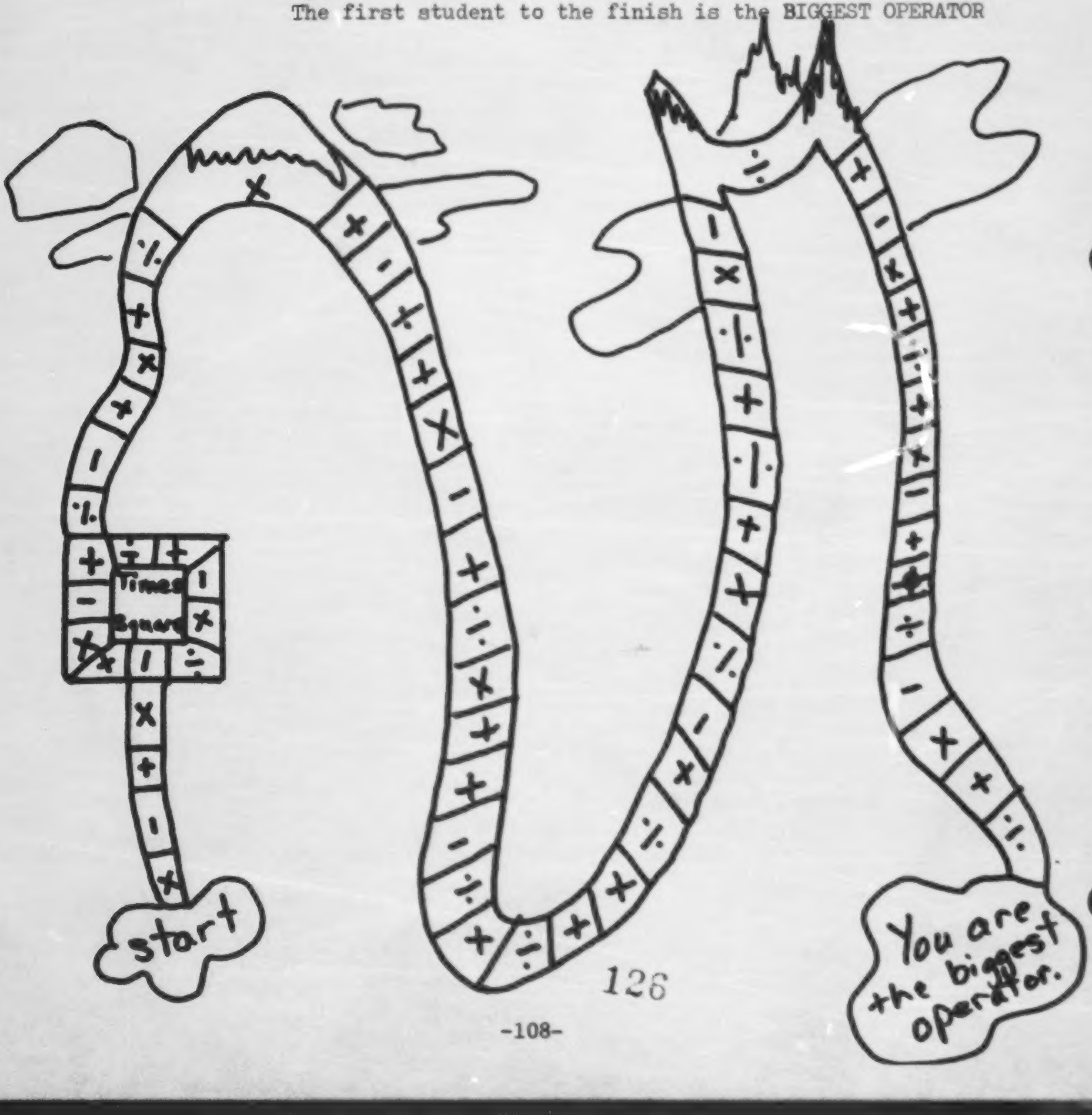
BIGGEST OPERATOR

NOTE: Pupils must have had instruction in all 4 operations before using this game.

Materials: Follow directions for basic step-a-set construction

Procedure:
¼ of winding path is marked as TIMES SQUARE
¼ of winding path is marked as THE SUMMIT
¼ of winding path is marked as THE GREAT DIVIDE
¼ of the winding path is marked as SUB-TRACT
Four decks of fact cards for the four operations are made

INSTRUCTIONS: Roll cube--move to space--pull a card from deck indicated and answer. (An incorrect answer may be penalized by 2 spaces backward.)
The first student to the finish is the BIGGEST OPERATOR


start
Times Square
You are the biggest operator.

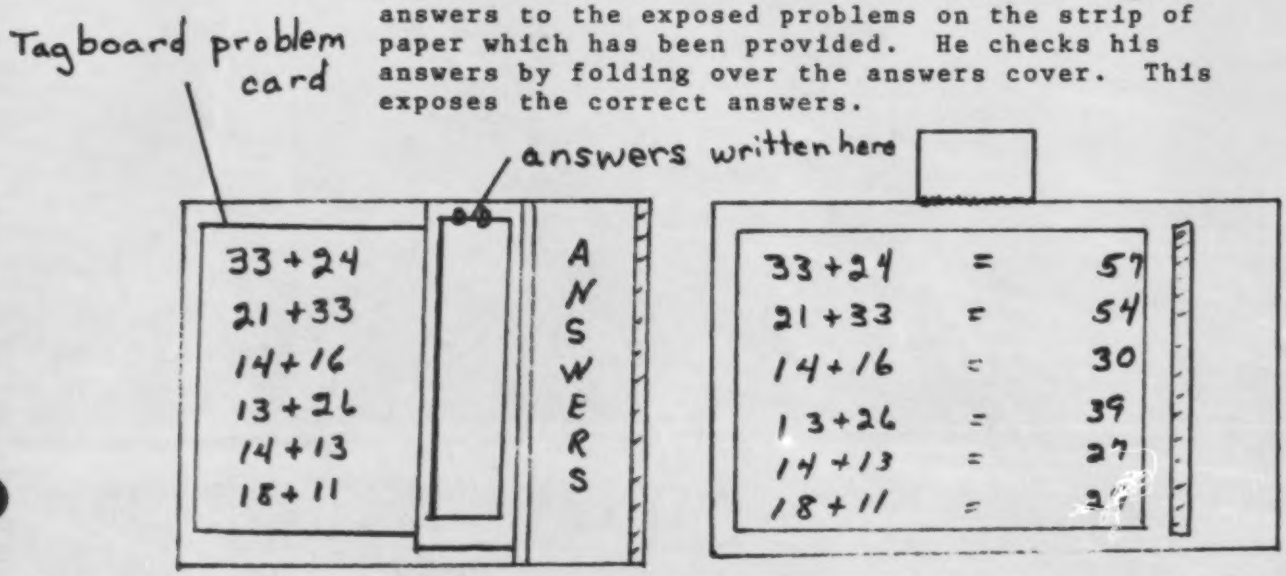
CARDBOARD MATH MACHINE

Materials:	1-14" x 12" piece of cardboard 2-4" x 12" pieces of cardboard tape 11" x 13" tagboard problem cards

Procedure: The piece of cardboard which serves as a cover for the answers is taped to the end of the 14" x 12" piece of cardboard (as shown in the illustration). The other 4" x 12" piece of cardboard is taped on top of the 14" x 12" piece of cardboard (4" from the right end). The child writes his answers on a sheet of paper which is placed on this piece of cardboard. When the problem card is placed in the self-teach-board, the piece of cardboard at the end folds over to cover up the answers. The piece at the top folds over to cover up the equals (=) symbol and provides a writing surface for the child's answers.

Instructions: The tagboard problem card is prepared by: placing a blank card in the self-teach board; folding over the two pieces of cardboard at the top and side; writing number problems on the exposed tagboard; lifting up the cover on which the answers are written and putting in the equals symbols for the problems; folding over the answers cover and writing the answers for the given problems. Several different problem cards should be prepared.

The child operates the self-teach-board by placing a problem card in the board and then writing the answers to the exposed problems on the strip of paper which has been provided. He checks his answers by folding over the answers cover. This exposes the correct answers.



CARTRIDGE MATH MACHINE

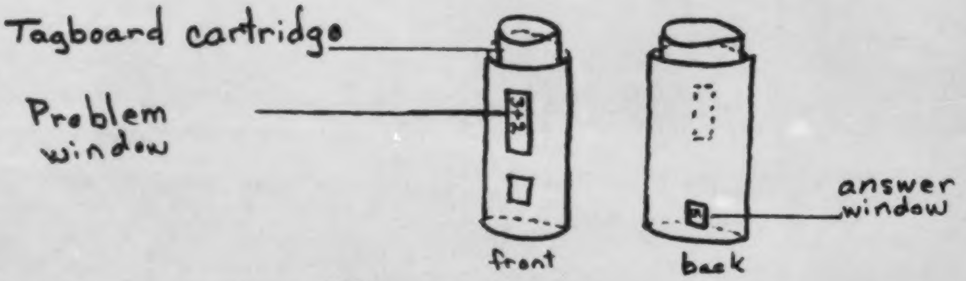
Materials: 6 oz. cardboard frozen juice cans
6¼" x 4½" pieces of tagboard
sharp knife

Procedure: A 1½" x ½" rectangle is cut in the can (½" from the top of the can). This rectangle hole will be called the problem window. On the opposite side of the can, a ½" x ½" square is cut (½" from the bottom of the can). This hole will be called the answer window. The 6¼" x 4½" pieces of tagboard are rolled and taped into cylinders. These cylinders will be referred to as cartridges. A paper cylinder is placed around the outside of the can. Holes are cut in the paper cylinder, to match the holes in the can. The paper cylinder is then used as a pattern for cutting holes in other cans. In this way, all machines will be identical, and the cartridges will be interchangeable.

Instructions: A blank cartridge is placed in the machine. A problem is written on the tagboard cartridge showing through the rectangular problem window. The answer for this problem is written on the cartridge showing through the square answer window on the opposite side of the can. The cartridge is rotated slightly until the problem is no longer visible, and the above procedure is repeated. This is continued until the cartridge is full of problems and answers. Several cartridges for each different operation (+, -, x) should be prepared.

The child operates the machine by placing a cartridge in it. He computes the answer for the problem that is exposed through the problem window and checks his answer with the answer shown through the answer window. He then rotates the cartridge to a new problem and repeats the above procedure. All the problems on the cartridge are answered in a similar manner.

The teacher may want to number the cartridges and keep track of the ones worked by each child.



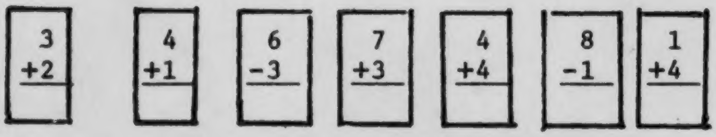
CHALK TRAY MATH

Materials: Deck of problem flash cards (addition, subtraction, multiplication and/or division), chalkboard chalk tray.

Procedure: Line up problem flash cards in the chalk tray. Place some masking tape about 10 feet away from the chalk tray to serve as a restraining line.

Instructions:

1. Divide the class into two teams by lining up classmates in pairs. Try to pair up students having equal abilities.
2. The first two students in competition step up to the line and face the problems in the chalk tray.
3. The teacher verbalizes an answer to one of the exposed problems.
4. The first child to spot, walk to, and pick up the correct problem is the winner.
5. The winner returns to the end of the line, while the loser sits down.
6. This process is continued until one team has been completely eliminated.



CHECKERS

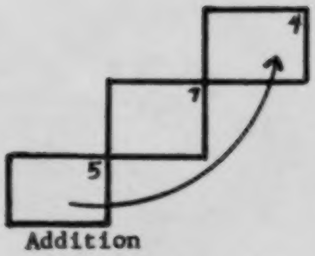
Materials: 1 game board (regular checker board or teacher-made board made of cardboard or pellon)
1 set of checkers
1 set of number cards

Procedure: Number each red square randomly with the numerals (0-9) for an addition, subtraction, or multiplication board. (For a division board place the dividend and divisor on opposite corners of each red square.)

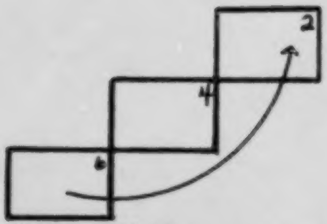
Instructions: The game is played as in regular checkers only before a move is completed--the child must answer the problem formed by the jump.

To jump a checker the pupil must give the answer to the addition, subtraction or multiplication problem formed by using the numbers from the square that he was on and the square on which he will land.

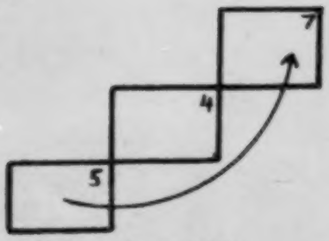
The child with the most checkers on the board at the end of the game is the winner.



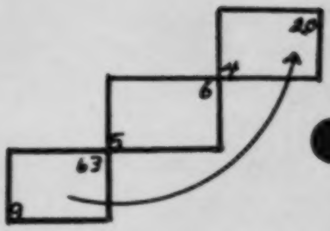
Addition
5 + 4



Subtraction
6 - 2



Multiplication
5 x 7



Division
20 ÷ 4

CLASSROOM SQUARES

Materials: 4" x 6" cards of tagboard or construction paper.

Procedure: Make sets of addition and subtraction facts, greater than, less than, equals and other math concepts.

Instructions:

1. The entire class makes up the squares. (Like "Hollywood Squares.")
2. A Master of Ceremonies is named.
3. Two players are selected as opponents (they may be called team captains).
4. One player chooses one of the children in the Classroom Squares to answer a problem.
5. The M.C. holds up one of the fact cards for the student to answer.
6. The student chosen gives an answer to the problem.
7. The opposite player either agrees or disagrees with the given answer.
8. If the player agrees that the answer given is correct, and it is, or he disagrees with a wrong answer, he receives a point.
9. The opposite player then has a turn to choose a "square" (pupil). The above procedure is repeated for this student.
10. The player making 5 points first remains in the game to face a new opponent. The one leaving becomes one of the Classroom Squares.
11. The same procedure is followed for the new opponent.
12. Sometimes the M.C. may make a true or false statement about a math concept instead of holding up a card for the child in the classroom to answer.

COMBINATION WHEEL
(Grade 3)

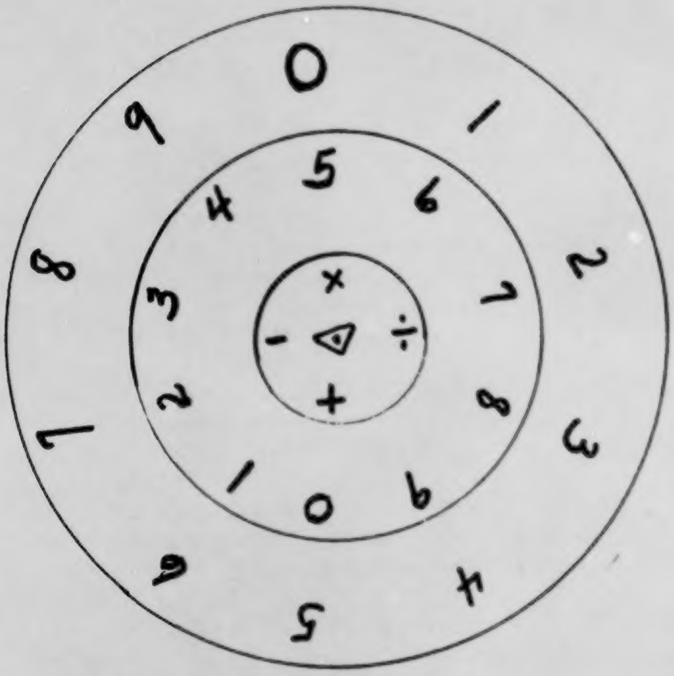
Materials:
4 - brightly colored poster boards
1 - small rivit

Procedure: From three of the colored poster boards cut concentric circles, one a 12" diameter, one an 8" diameter, and one a 4" diameter. Cut a 1 1/2" pointer from the fourth poster board. Secure with a rivit in the center. Place numerals from 0-9 on the outside and first inner circle keeping them in a vertical order. Place the 4 operations on the second inner circle.

Instructions: A few possible combinations when working in a vertical direction across and around the wheel are:

1. Add any two, three or four vertical numerals.
2. Multiply any two, three, or four vertical numerals.
3. Add two numerals, subtract the third, and multiply the fourth.
4. Multiply two numerals, divide by the third (if even and add or subtract the fourth.
5. Divide the first two numerals (if even), then continue with any of the other three operations.
6. Add, subtract, and add.
7. Multiply, add, and subtract.
8. Move inside numeral wheel to the right adding just the two outside numerals each time.
9. Apply operations to the outside numerals only in a vertical direction.
10. Move inside numeral wheel and continue experimenting with various combinations of operations.

COMBINATION WHEEL


0
1
2
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6
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8
9
0
1
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3
4
×
÷
+
-

SOURCE: Florence Rives, Teacher Chosen Ideas, Instructor, March, 1971, P. 83

CRAZY SWIRLS

Materials:

poster board 22" x 28"
magic markers
small plunger 1" - 2" in diameter with a suction cup on one end.
bandana

Procedure:

Make swirls on the board as in the diagram. In a prominent swirl write Crazy Swirls.

Instructions:

1. Cover the student's eyes with the bandana.

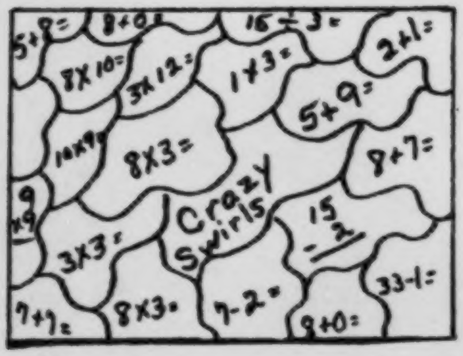
2. The blindfolded student is then given the plunger and positioned in the direction of the crazy swirls.

3. If the student hits a problem with the plunger and he or she can answer the problem correctly, his team gets ten points. If the student misses the board with the plunger, a problem is given to him orally by the aide or teacher. The correct answer to this problem is worth five points.

4. If the student hits the crazy swirls space with the plunger, he can earn ten points for each problem on the board that he can answer correctly.

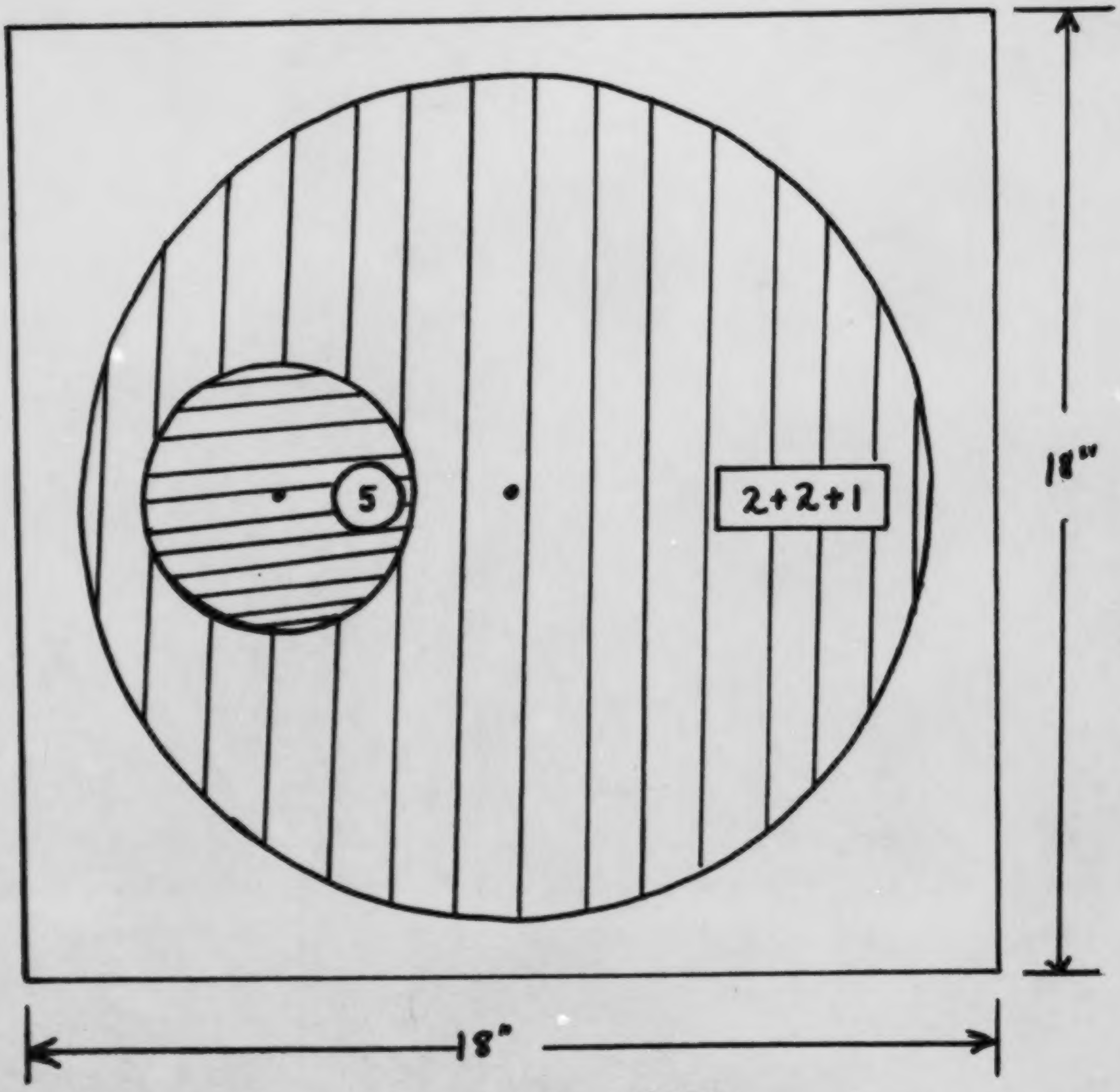
5. If the plunger lands on a line, the student may attempt to answer all problems touching the line. He will receive 10 points for each correct answer.

6. The student with the most points at the end of the contest is declared the winner.



DIAL-A-PROBLEM BOARD

Materials:	1 - 18" x 18" piece of cardboard one cardboard circle with 8" radius one cardboard circle with 3" radius two brads
Procedure:	A small, rectangular hole is cut near the edge of the large circle. A small, circular hole is cut near the edge of the small circle. The small circle is attached to the large circle by putting a brad through the center of the small circle. The brad then goes through the large circle about halfway to its edge. The large circle is attached to the square by placing a brad through their centers. A small hole is cut in the large circle, directly under the hole cut in the small circle.



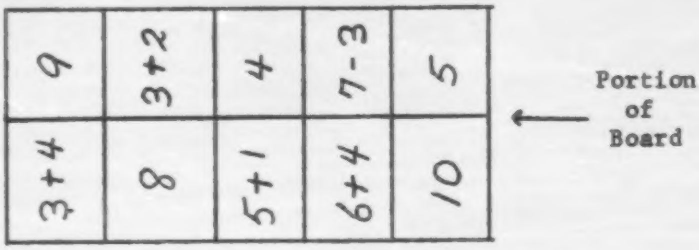
DOUBLE DRAW

Materials:	A deck of cards made to contain a whole family of number facts, such as: $\boxed{7\times6=42}$ $\boxed{6\times7=42}$ $\boxed{42\div7=6}$ $\boxed{42\div6=7}$ There may be 10 or 12 complete books like these above.
Procedure:	Double Draw can be played by 4 pupils, but 2,3,5, or 6 may play.
Instructions:	Deal 6 cards to each. Leave the rest in the kitty. Pupils take turns asking for cards to complete a "book." Player may ask as long as he is successful, then play goes on to next person.

FACT BOARD

Materials: 1 - 20" x 22" piece of tagboard or cardboard
1 - deck of 2" x 4" pieces of construction paper

Procedure: Use a magic marker to rule the 20" x 22" piece of cardboard into 2" x 4" sections. Fill these sections with either number problems or answers to number problems. (See the illustration below.) The cards will reflect the corresponding number problem or answer. (e.g. If the board shows 3 + 5, the card would show 8.)



9	3+2	4	7-3	5
3+4	8	5+1	6+4	10

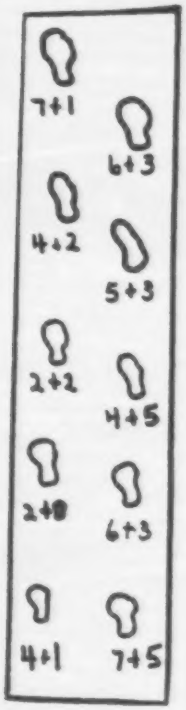
INSTRUCTIONS FOR FACT BOARD

1. The child is given a fact board and its deck of cards.
2. The child covers the rectangles of the fact board with the rectangular cards. He must match answer cards to problem sections and problem cards to appropriate answer sections.

FOOTPATH

Materials: Long roll of paper or oil cloth; construction paper footprints.

Procedure: Paste the shapes of the footprints on the long roll of paper to resemble a path. Write problems next to the feet with a grease pencil or water color magic marker. The child starts at one end and continues walking down the path stepping on each footprint until he misses a problem. (Note! He must answer the problem on the footprint before he can step on it.) Each child who can walk the entire path without missing a problem is a winner.



FOUR WAY (All Operations)

Materials: 45 cards cut from tagboard (2" x 3")

Procedure: Number as shown using two different colors for the numbers on the cards.

Instructions: The deck is shuffled and five cards are dealt to each player. One card is turned face up and the remaining undealt cards are put in a stack face down. The person at the left of the dealer is first.

Suppose the 6-2 card is the one that is face up. The numbers on this card may represent 6 + 2 = 8; 6 - 2 = 4; 6 x 2 = 12; or 6 ÷ 2 = 3. If the first player has a card with two numbers whose sum, or difference, or product, or quotient is 8, or 4, or 12 or 3, he may play the card from his hand by placing it face up on the 6-2 card.

If he does not have such a card in his hand, he must draw the top card from the stack and see if it can be played. If the drawn card cannot be played, it is added to the player's hand and he draws again. He continues till an 8, or 4, or 12, or 3 is found. When a card can be played, it is placed on the face-up pile and the next player takes his turn.

For example, assume the first player plays the 8-2 card, representing 8 ÷ 2 = 4, on the opening 6-2 card. The second player must now determine the new numbers that can be played. He may use any one of the four operations to name one of the new numbers, in this instance either 10 or 6 or 16 or 4.

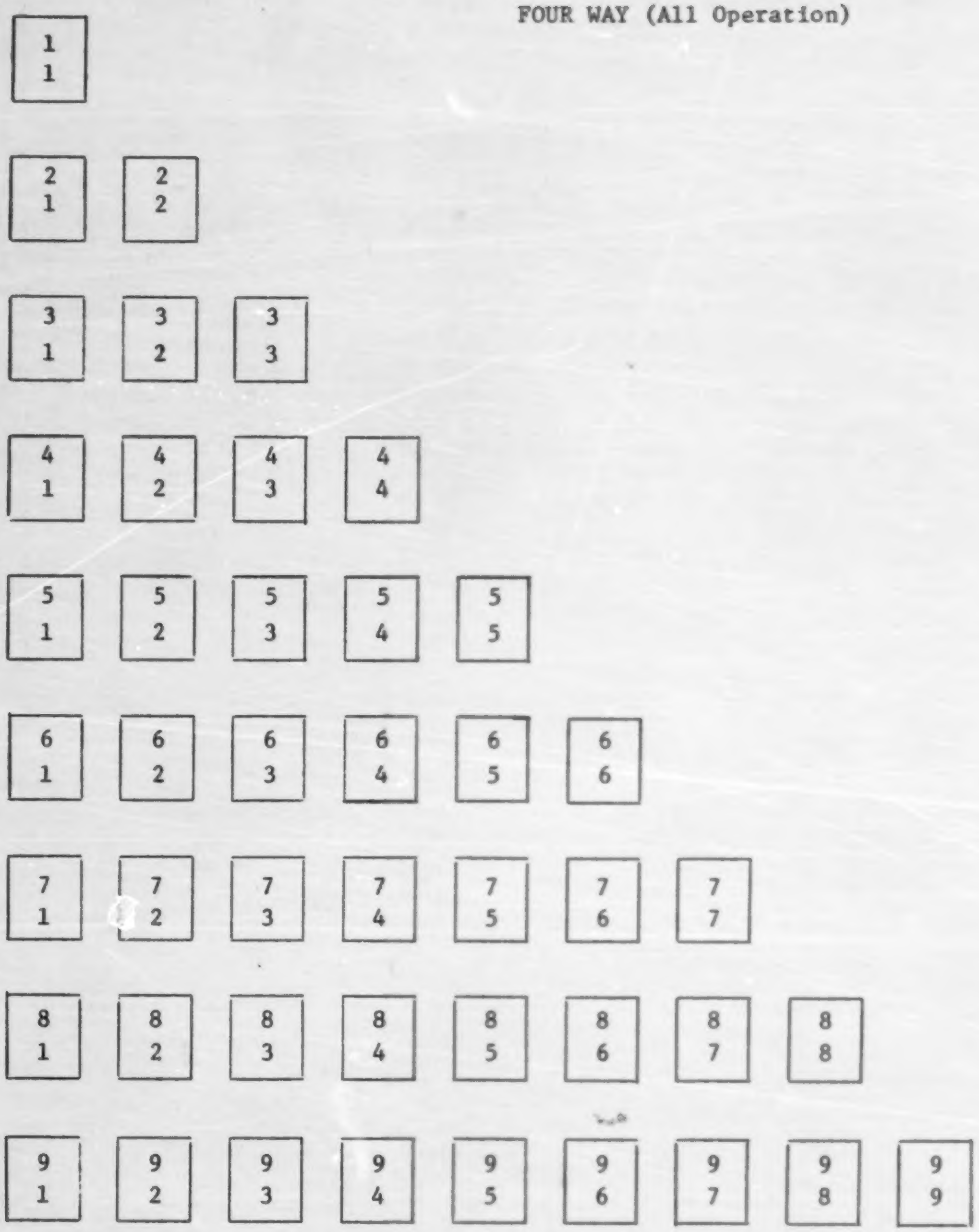
Any time a card is played, another player may challenge the play by asking why that particular card can indeed be played. The game is won by the first person to play all his cards. If all the cards have been drawn and the game has not been won, all but the top card on the face-up, or discard, pile are reshuffled and the game continues.

Notice that the two numbers on some of the forty-five cards cannot be used to name four different whole numbers. The sum and the product may name the same number; or the product and the quotient may name the same number; or the operation of division may not yield a whole number. Since some cards are more likely to be playable than are others, there are opportunities to make strategic decisions.

Players of this game are continually mentally performing the operations of addition, subtraction, multiplication and division.

DIAGRAM

FOUR WAY (All Operation)


1 1
2 1
2 2
3 1
3 2
3 3
4 1
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5 1
5 2
5 3
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5 5
6 1
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8 7
8 8
9 1
9 2
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9 4
9 5
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9 7
9 8
9 9

GAME CALLED WAR

Materials:	index cards (3" x 5") magic marker
Procedure:	Decks of flash cards (showing addition problems, subtraction problems, multiplication problems, addition and subtraction problems) are made by the teacher.

INSTRUCTIONS FOR GAME CALLED WAR

1. Only two or three children at a time are allowed to play the war game.
2. Each child is given the same number of cards from one of the decks.
3. The child places the cards face down in front of him.
4. Each child turns over the top card from his pile.
5. The child whose card represents the problem with the largest answer takes all of the exposed cards. If the answers are the same, the cards remain for the next winner to collect.
6. The next card from the pile is exposed. The child with the largest answer wins these cards. This continues until all the cards are played.
7. The child with the most cards at the end of the contest is the winner.

KING OF THE HILL

Materials: Chalkboard

INSTRUCTIONS FOR KING OF THE HILL GAME

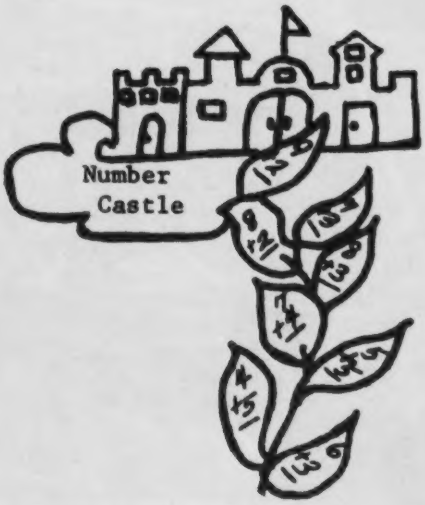
1. The teacher chooses two children to go to the chalkboard. (Try to choose children of equal ability.)
2. Give the children a problem to solve.
3. The first child to get the problem solved correctly is declared the winner.
4. The winner writes his name on the chalkboard and makes a tally beside it.
5. The winner then chooses a child to face him in the next round of competition.
6. Repeat the above procedure.
7. If the same child wins, he records another tally by his name and chooses a different competitor.
8. At the end of the period choose the grand winner by seeing who has won the most contest.

MAGIC MATH BEANSTALK

Materials:	cardboard - 22" x 28" paper clips (to hold the leaves)
Procedures:	Illustrate the cardboard with the castle, house and beanstalk. Cut places for paper clips to hold the leaves. Cut leaves from green construction paper.

Instructions:

1. This game can be played with one player or a team.
2. The player begins answering the problems at the base of the beanstalk and continues to answer the problems in an upwardly direction as long as he gives correct answers.
3. If the player gives an incorrect answer or cannot answer the problem, he must return to the ground.
4. The first player that successfully answers all the problems from ground to castle along the beanstalk is the winner.
5. If the game is played as a team, have each player answer one problem following the rules above.
6. The first team reaching the number castle is the winner.



MAKE-A-PROBLEM GAME

Materials:

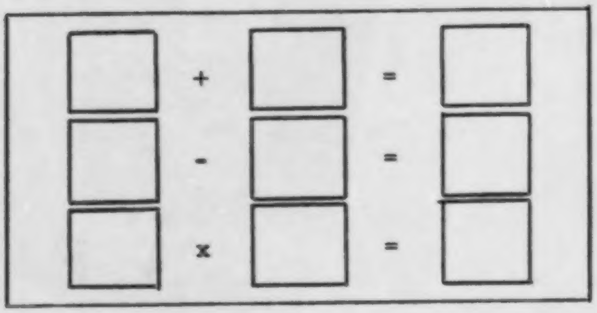
1 - 1-" x 12" piece of styrofoam or cardboard
9 - counting blocks
1 - can
1 - 10" x 12" piece of cardboard

Procedure:

Square holes large enough to hold the counting blocks that are cut in the styrofoam (in the positions shown in the illustration). The 10" x 12" piece of cardboard is glued on the back of the styrofoam. The symbols +, -, x, and = are placed on the board (as shown in the illustration). The faces of the counting blocks are marked with the numerals, 1-6. The board could be marked so all the sentences use the same operation.

Instructions:

a. Two to four players may participate at one time.
b. The nine counting blocks are placed in the can.
c. A player rolls the cubes on the table, exposing the numbers on their top faces.
d. The player then makes as many correct number sentences as possible, by placing the cubes in the holes of the "Make-a-Problem" board. He must use the numbers shown on the top face of each cube.
e. The player adds the numbers of the unused cubes (from the top faces) and records the sum as his score. The person who has the low score at the end of the contest is the winner.



MATH CARPET

Materials: newspaper or wrapping paper

Procedure: Make a carpet (see illustration) of newsprint or wrapping paper. It must be wide enough for three pupils to stand side by side. The number problems need to be large enough to be seen easily.

Have a spinner or other device for finding random numbers 1 through 3.

To play the game divide the children into 3 teams. Have each team select someone to be the "Marker."

Place the carpet on the floor and have the three "Markers" stand in stocking feet at one end of the carpet, each ready to advance from problem to problem in his lane.

Instructions: Someone from each team in turn will spin to see whether that team's "Marker" will advance one, two, or three spaces. The "Marker" will tell his team what number problem he has reached. The team member who spun, must try to give the answer. If he cannot do so, the "Marker" must move back to the place he was before this turn. Teams must listen to one another. The team whose "Marker" reaches the other end of the carpet first is the winner.

Make as long as desired for your group, (substitute single number 6, 8, 5, etc. and spinner give combination).

2+4	1+7	5+2
6+1	3+3	4+4
4+4	2+4	2+6
6+3	6+1	3+4
5+2	4+3	3+3
4+5	5+4	4+2
1+7	2+7	3+5

MATHOPOLY

MATERIALS: POSTER BOARD (22" x 28")
MAGIC MARKERS
TAGBOARD CARDS (2" x 3") (40 OR 50)

PROCEDURES:

(1) MARK OFF THE BOARD IN THE MANNER SHOWN ON THE DIAGRAM.

(2) CHANCE CARDS SHOULD BE MADE WITH BOTH GOOD AND BAD THINGS--(E.G. MOVE UP FIVE SPACES, GO TO JAIL, GO TO NEAREST JACKPOT). COMMUNITY CHEST CARDS ARE BOTH GOOD AND BAD. JACKPOT CARDS ARE GOOD THINGS--E.G. GET OUT OF JAIL FREE, SEND SOMEONE ELSE BACK FIVE SPACES, GO UP EIGHT SPACES). BAFFLE CARDS ARE TO THE PLAYERS DISADVANTAGE (MOVE BACK THREE SPACES, GO TO JAIL, MISS A TURN). ABOUT 12 CARDS OF THE FOUR DECKS IS ADEQUATE.

(3) MAKE 12 GET OUT OF JAIL CARDS. MIXED OPERATIONS ARE GOOD--(E.G. 8 x 8 + 5). MAKE 12 FREE PARKING CARDS WITH SINGLE OPERATIONS--(E.G. 9 x 7).

PLAYING INSTRUCTIONS:

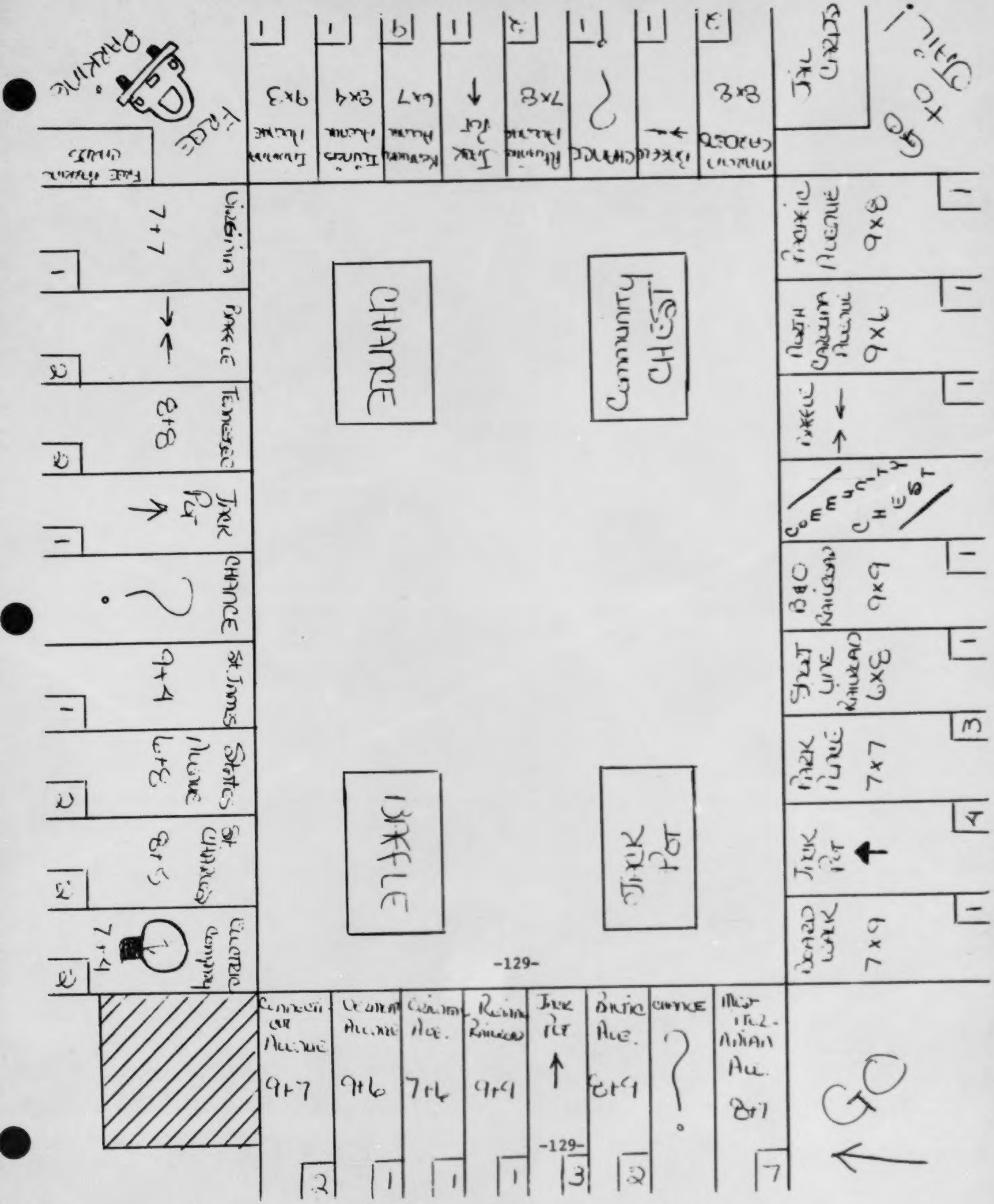
(1) A PLAYER STARTS AT GO AND MOVES TO THE FIRST SPACE. IF THE PLAYER CAN ANSWER THE PROBLEM, HE OR SHE MOVES THE NUMBER OF SPACES IN THE LITTLE SQUARE IN THE LOWER RIGHT CORNER. THE PLAYER CONTINUES TO MOVE UNTIL HE OR SHE MISSES A PROBLEM OR TAKES ONE OF THE FOUR CARDS FROM THE MIDDLE OF THE BOARD. PLAY THEN ROTATES TO THE NEXT PERSON.

(2) WHEN A PLAYER LANDS ON FREE PARKING, HE OR SHE IS GIVEN A FREE PARKING CARD. IF THE PLAYER CAN ANSWER THE PROBLEM IN A PREVIOUSLY AGREED TIME. THE PLAYER GOES UP FOUR SPACES TO THE NEXT JACKPOT. IF THE PLAYER MISSES, HE OR SHE GOES TO JAIL.

(3) WHEN A PLAYER LANDS IN JAIL, IF HE OR SHE HAS A GET OUT OF JAIL FREE CARD, THEY CAN TURN IN THE CARD, WITHOUT MOVING TO JAIL. OTHERWISE, THE PLAYER GOES TO THE SPACE MARKED JAIL, AND ON THE NEXT TURN, IS GIVEN A CERTAIN AMOUNT OF TIME TO ANSWER A JAIL CARD. IF THE PLAYER IS SUCCESSFUL HE OR SHE MOVES TO JUST VISITING AND PROCEEDS FROM THERE NEXT TIME. AFTER THREE TRYS AT JAIL CARDS (ONE EACH TURN) THE PLAYER MOVES TO JUST VISITING AUTOMATICALLY, EVEN WITHOUT SUCCEEDING AT A JAIL CARD.

(4) A PLAYER MAY HAVE AS MANY CARDS FROM THE MIDDLE OF THE BOARD AS HE OR SHE EARNS BY LANDING IN THE PROPER SPACES.

(5) THE FIRST PLAYER TO GO ALL THE WAY AROUND THE BOARD TO GO WINS.


Connecticut Avenue
9+7
2
Vermont Avenue
9+6
1
Oriental Ave.
7+4
1
Reading Railroad
9+9
1
Jack Pot
↑
3
Baltic Ave.
8+9
2
CHANCE
?
Mediterranean Ave.
8+7
7
GO
Boardwalk
7x9
1
Jack Pot
4
Park Place
7x7
3
Short Line Railroad
6x3
1
B&O Railroad
9x9
1
COMMUNITY CHEST
Raffle
1
North Carolina Avenue
9x6
1
Pacific Avenue
9x8
1
GO to Jail!
Jail Cards
Marvin Gardens
8x8
3
Raffle
1
CHANCE
?
1
Atlantic Avenue
7x8
2
Jack Pot
1
Kentucky Avenue
6x7
9
Illinois Avenue
8x4
1
Indiana Avenue
9x3
1
FREE PARKING
P
Free Parking Cards
Virginia
7+7
1
Raffle
2
Tennessee
8+8
2
Jack Pot
1
CHANCE
?
St. James
9+4
1
States Avenue
8+7
2
St. Charles
8+5
2
Electric Company
7+4
2
CHANCE
Community CHEST
RAFFLE
JACK POT

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MITTEN'S PRIVATE AQUARIUM

Materials:

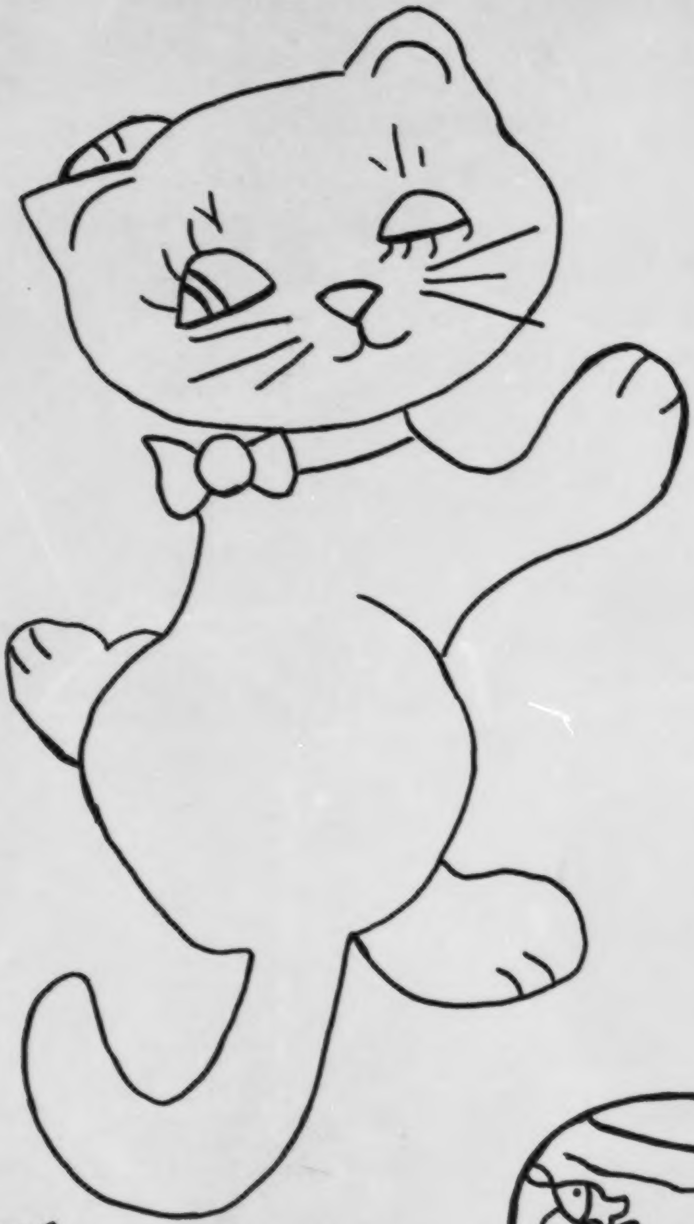
1 paper kitten
1 cardboard shaped aqaurium
8 pizza rounds or tagboard circles
paper clips
flash card fish

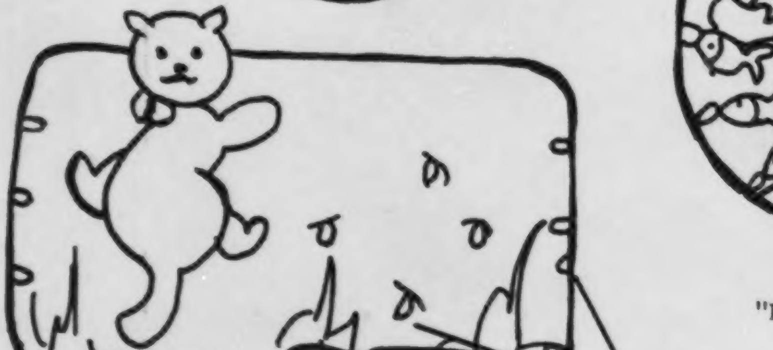
Procedure:

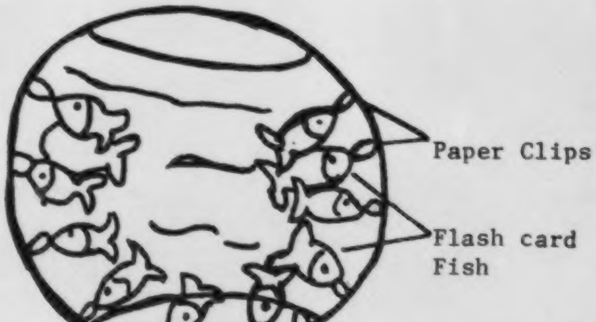
Attach the kitten to the side of the cardboard shaped aquarium. Randomly attach paper clips to the aquarium. Draw a fish bowl on each of the pizza rounds. Attach several paper clips to these fish bowls. Use these paper clips to attach the flash card fish to the fish bowls. The flash card fish reflect problems currently being studied in your classroom.

Instructions:

Give each student a fish bowl (pizza round) with the flash card fish attached to it. The student selects one of the fish problem cards to answer. If he gives an incorrect answer, the fish is lost to Mitten and is attached to his aquarium. The student retains the card if he is able to give the correct answer. The student at the end of the game who has the most fish is the winner.




Paper Clips


Paper Clips
Flash card Fish

"Pizza Round" Fish Bowl

Mitten's Aquarium

(Winnie Childers)

MONSTER MADNESS

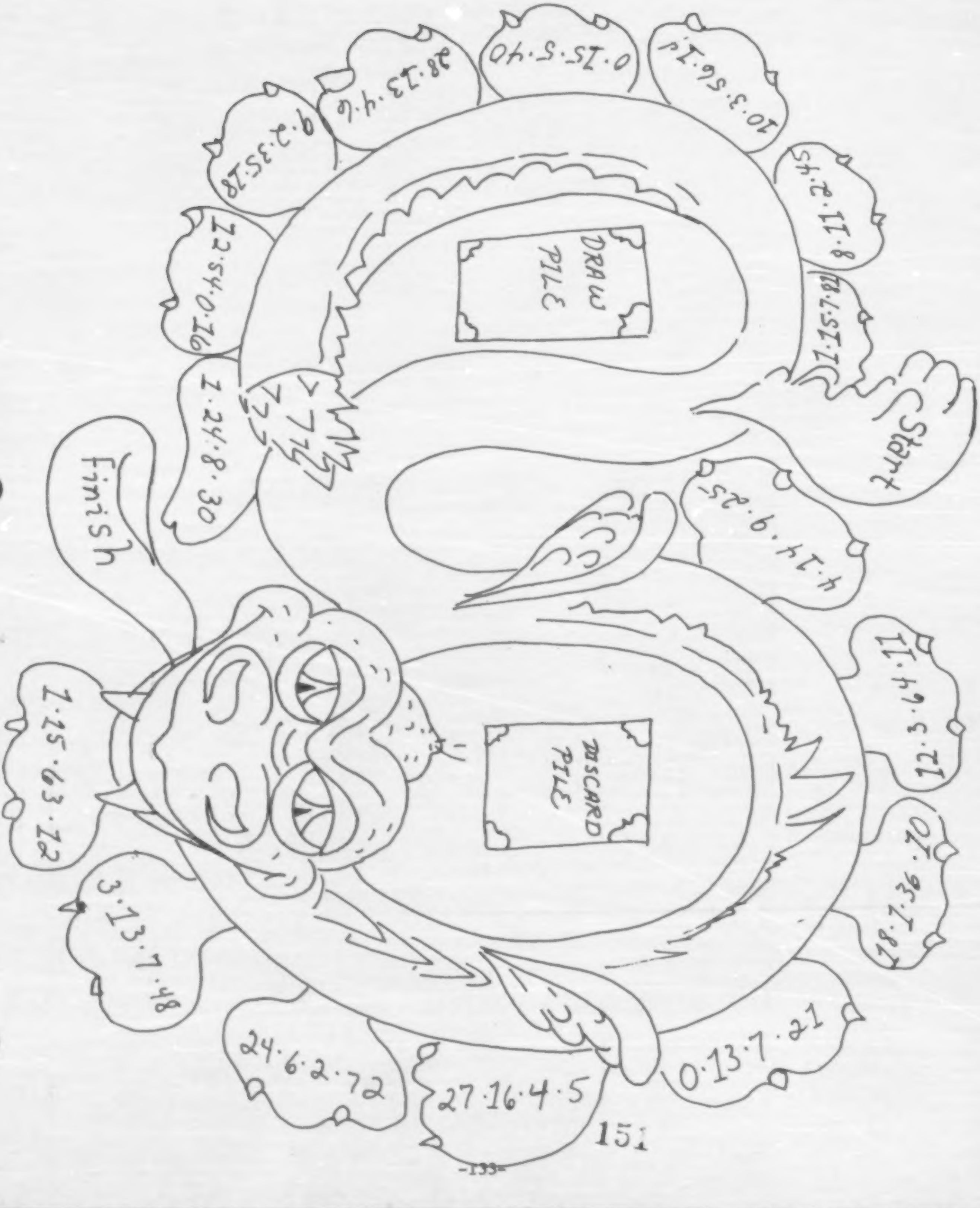
Materials:

4 different game markers
45 cards
game board

Instructions:

1. Person whose first name is closest to A goes first.
2. Draw a card.
3. You may add, subtract, multiply, or divide the two numbers written on the card to try to make an answer on the next foot of the monster.
4. If you can make an equation, you may move to the next foot.
5. Place you card in the Discard Pile.
6. First player to reach the monster's last foot is the winner.

MONSTER MADNESS


Start
1·15·7·22
8·11·2·45
10·3·56·14
0·15·5·40
28·13·4·6
9·2·35·28
12·54·0·16
1·24·8·30
Finish
1·15·63·22
3·13·7·48
24·6·2·72
27·16·4·5
0·13·7·21
18·7·36·20
12·3·4·11
4·14·9·25
DRAW PILE
DISCARD PILE

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MOON WALK

Materials:

cardboard - 35" x 23" (covered with white paper)

2 - 12" x 18" construction paper (white)

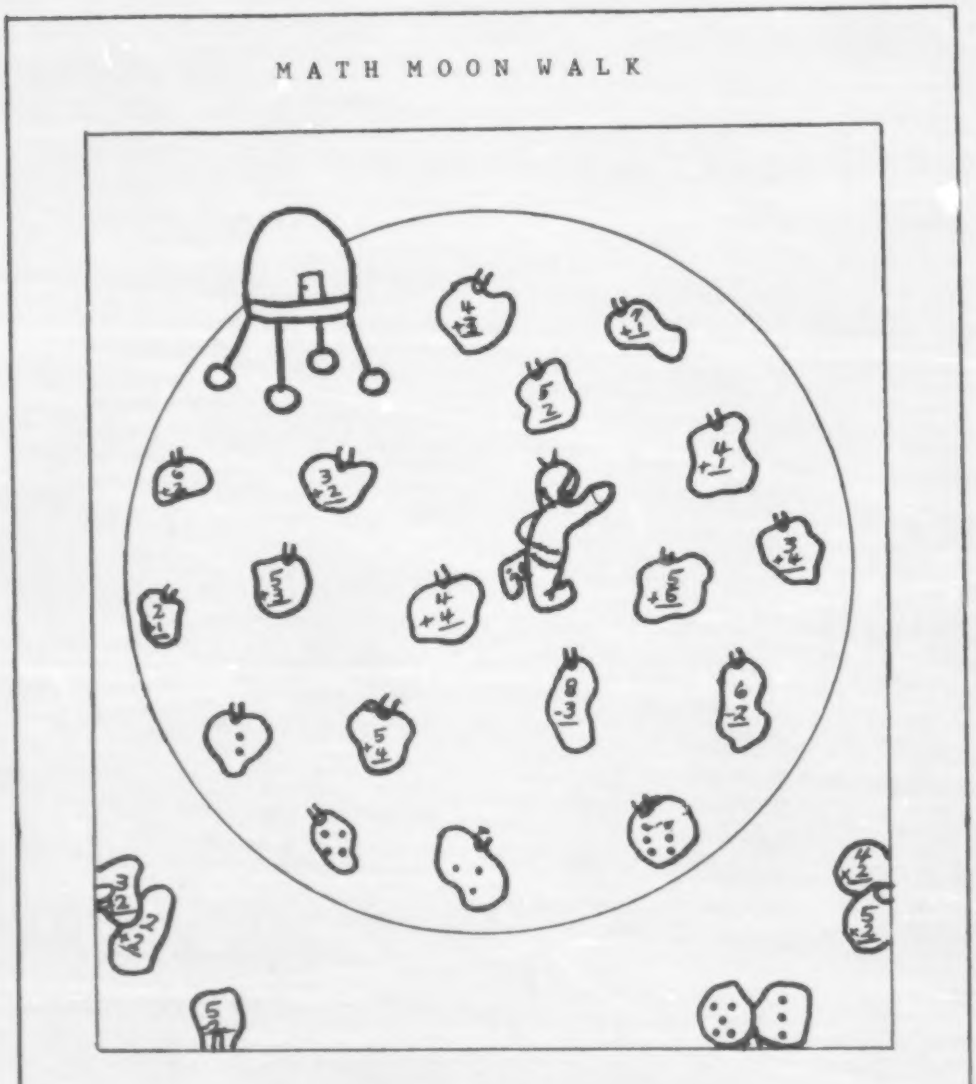
17" diameter circle, construction paper (black)

moon rock, construction paper (grey)

paper clips

Procedure:

Paste black moon on white construction paper. Paste or pin white construction paper on large cardboard that has been covered with white paper. Cut small places in the black paper for a paper clip to hold grey moon rocks.



INSTRUCTIONS FOR MOON WALK

1. Four, six or eight can play.
2. To begin, have all moon rocks turned over so as not to expose the problems.
3. The player selects a moon rock. If he correctly answers the problems on its back, he may keep it. If he gives an incorrect answer it is returned to its original position.
4. The child collecting the most moon rocks is the winner.
5. Moon rocks could be used with numerals, sets, addition, subtraction, or multiplication problems.

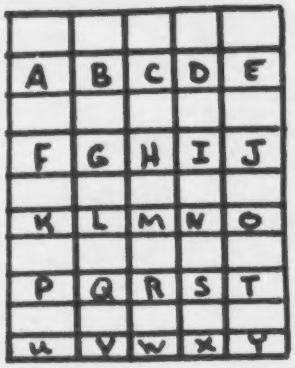
NUMBER CONCENTRATION GAME

Materials:
1 - 24" x 24" piece of tagboard
25 library pockets
masking tape

Procedure: The pockets are taped on the piece of tagboard (as shown in the illustration). Masking tape is used to divide the board into into 25 compartments. Each compartment has a pocket large enough to hold a 3" x 5" index card. The pockets are labeled (as shown in the illustration), The index cards will show either sets or numerals. A set or a numeral is written on the top half of the index card. It can then be turned over and hidden from view when it is placed in the pocket.

Instructions:

1. The class is divided into two teams.
2. The first player on a team calls for two cards to be turned over. He does this by stating their pocket letters (e.g., A and M).
3. The object of the game will be to get a certain total (e.g., six).
4. The child must give a verbal description for combining the numerals or sets on the exposed cards.
   a. If his total is the predetermined designated total, he gets two points for his team and another turn, providing he gives the correct verbal sentence associated with the cards. The cards are then removed from the board.
   b. If he gives the correct verbal sentence, but the total is not the predetermined total, he then gets one point and the cards are replaced in the same pocket (face down).
   c. If he gives an incorrect answer, the other team has an opportunity to give the correct answer and to receive one point.
   d. If no one gives the correct answer, the cards are turned back to their original positions.



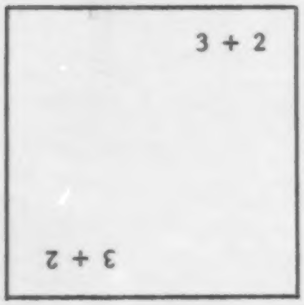
5. The players on the teams take turns answering problems.
6. The only way a teammate gets more than one turn is by turning over the cards that give the designated total. At all other times he gets only one turn.
7. The children are allowed ten seconds to give the correct verbal sentence.
8. A scorekeeper is appointed.
9. The team with the most points at the end of the game is the winner.
10. The game continues until the board has been emptied of cards, or until a certain time elapses.

O-RATS

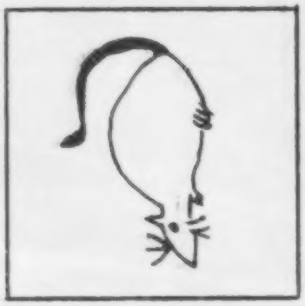
Materials: deck of 3" x 4" tagboard cards

Procedure: Write number problems at the top and the bottom of the cards (see illustration below). Make cards representing problems which have several different answers, but make sure that each problem card can be paired with problem card having the same answer. Draw a picture of a rat on the back of the card.

Front



Back

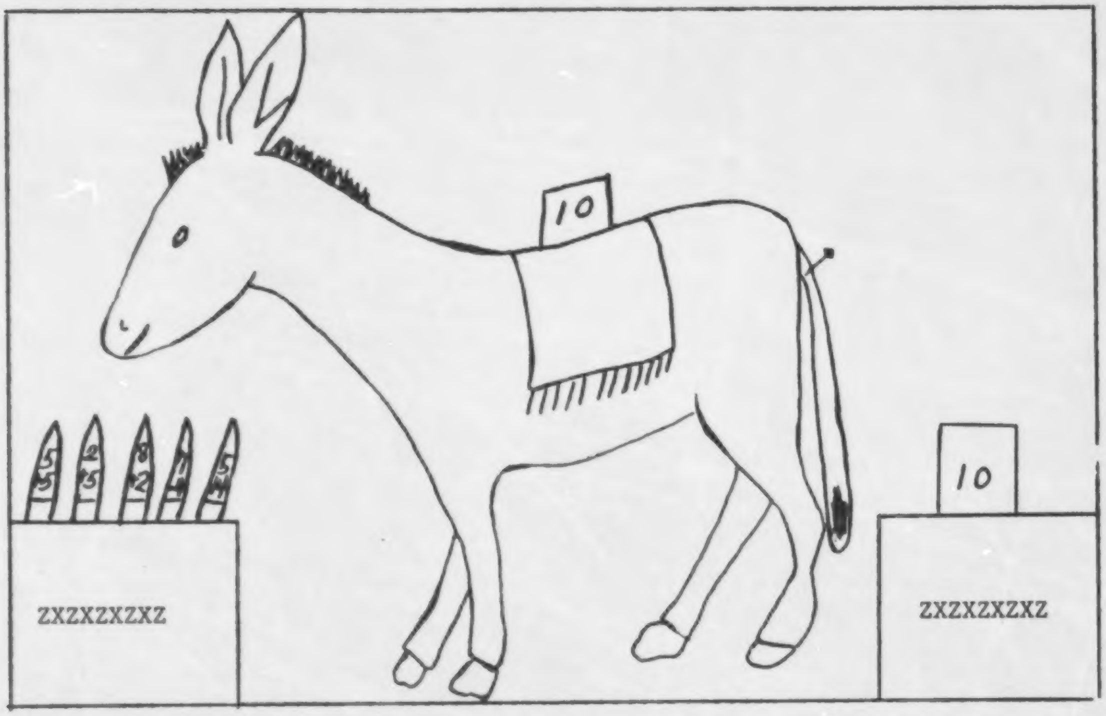


INSTRUCTIONS FOR O-RATS

1. Deal out all the cards to the children.
2. The children make pairs of those cards whose problems have the same answer.
3. Each child lays down his matched pairs when it is his turn. He also draws a card from the hand of the child on his left.
4. The game continues until someone plays all of his cards and says "O-Rats."

PIN THE TAIL ON THE DONKEY

Materials:	12" x 24" piece of cardboard 13" x 13" piece of cardboard construction paper (all colors)
Procedure:	Cover the 12" x 24" piece of cardboard with paper. Cut a donkey out of the 13" x 13" piece of cardboard. Glue the donkey to the large piece of cardboard. Staple pieces of construction paper to the cardboard to make pockets to hold the tails showing problems and the cards showing answers.



INSTRUCTIONS FOR PIN THE TAIL ON THE DONKEY

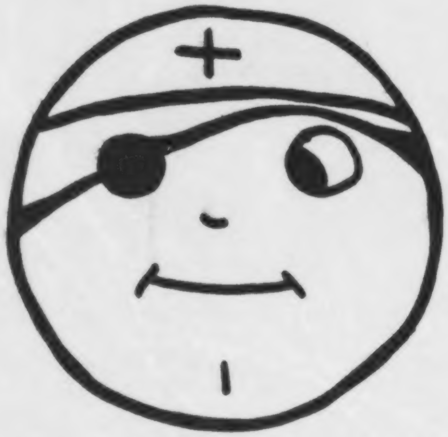
1. Require the child to select an answer card and place it in a slot above the saddle blanket.
2. The child then must find all the number facts that he can for the numeral on the answer card.
3. Continue until all children have had a turn.

PIRATES OF THE CARIBBEAN

Materials: Follow the construction directions for the basic step-a-set game board.

Procedure: Label each step on the pathway with a pirate's face, and indicate an operation on his hat. (+, -, x, ÷) Make the finish line an island. Make one deck of problem cards for each operation used on the pirates hats.

Instructions: Each pupil rolls the number cube and moves that number of spaces on the game board. He then draws a card from the deck designated by the sums on the pirate's hat. If he answers the problem correctly he may keep the card. There will be two winners, the first student to reach the island and the student who finishes with the most cards.



Sample step on the game board.

POPCORN

Materials: A set of addition, subtraction or multiplication flash cards.

Procedure: Hand out flash cards to pupils until the entire set has been distributed. Some children may have more than one card.

INSTRUCTIONS FOR POPCORN GAME

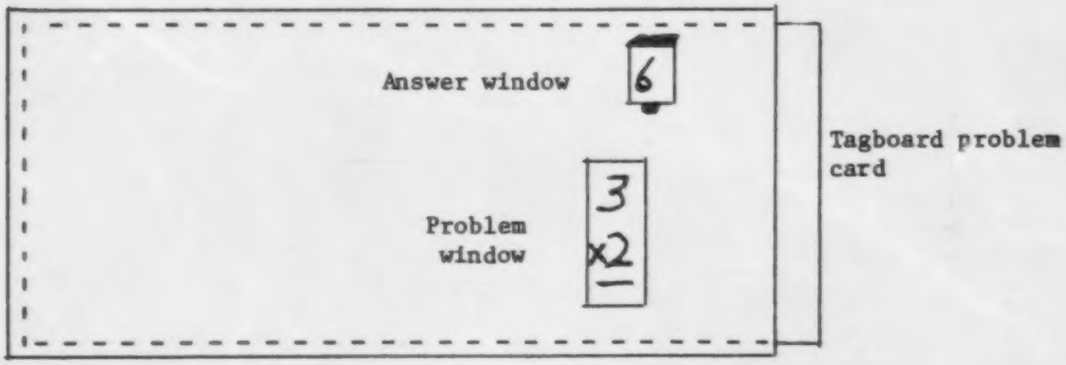
1. State a number verbally (e.g., 8).
2. The first child to pop up (stand up) with a card which has a problem whose answer is the number stated is the winner. Possible problems for the above example are 2 + 6, 4 + 4, 3 + 5, etc.
3. Require the child to state the number sentence verbally.

NOTE: This can be used to review all of the basic computations.

PULL-A-PROBLEM BOARD

Materials: 1 - 12" x 18" folder on tagboard folded into a "sleeve"
11" x 20" pieces of tagboard

Procedure: Staple all but right-hand side of the "sleeve." The tagboard problem cards will be inserted in this slit. Two rectangular holes are cut in the top of the sleeve (as shown in the illustration). Only three sides of the answer window are cut. This makes a small door. Insert the smaller tagboard in the sleeve. The edge will extend out. Slowly pull on this edge, lift answer window and write answer. Write problem in Problem Window. Continue until left edge is almost in view.



Instructions: A child operates the board by placing a tagboard problem card in the machine. He works out the problem which is exposed through the problem window and checks his answer by lifting the door of the answer window. (This exposes the correct answer). He then pulls out the tagboard card until a new problem is exposed in the problem window and repeats the above procedure.

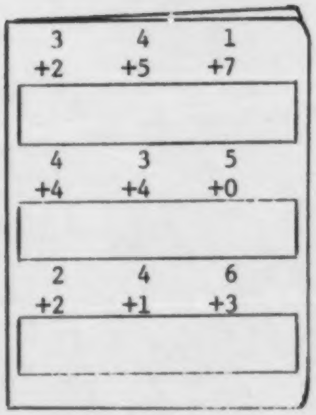
SELF TEACH FOLDERS

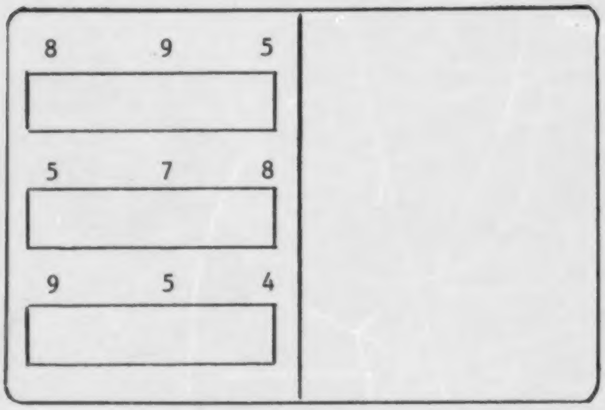
Materials: one regular size folder

Procedure: Three windows are cut in the front of the folder.
Problems are written above the windows.
Answers are written on the back of the windows.

Instructions:

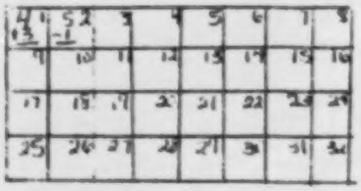
1. The child is given one of the self-teach-sheets. He places a sheet of paper in the folder, computes the answer, and writes it through the window (on the paper placed in the folder). He answers all the problems on the sheet in a similar manner.
2. When the child gets ready to check his answers he takes out the sheet of paper showing the answers, folds the folder the other direction, places the answer sheet back in the folder and checks his answers.
3. Self-teach-sheets can be made for all the basic operations. The teachers may want to number the sheets and keep a record of those with which each child has worked.





THE SPIDER WEB

Material:	1 tagboard 24" x 24" 1 tagboard 9" x 3" black yarn 6 styrofoam balls pipe cleaners 1 cube with sides marked 1, 2, 3
Procedure:	Draw web on tagboard (24 by 24). On tagboard (9 by 3) write one through thirty-two boxes with a different problem in each each according to what grade level is playing the game. Number the sections of the web one to thirty-two.
Instructions:	Each pupil takes a side of the board. Draw to see who is first. He rolls a cube, which has one, two, or three on it. He moves up, down, left or right, not diagonal. He says the number he lands on. When the pupil calls out his number you ask him the corresponding problem from the tagboard. If the problem is answered correctly the pupil gets a fly. At the end of fifteen minutes check to see how many flies each pupil has.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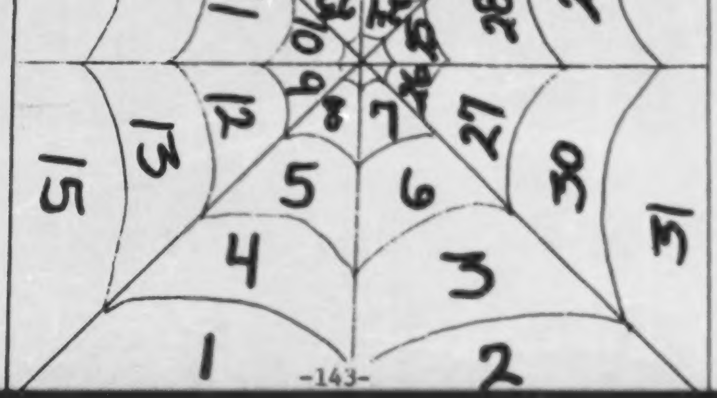
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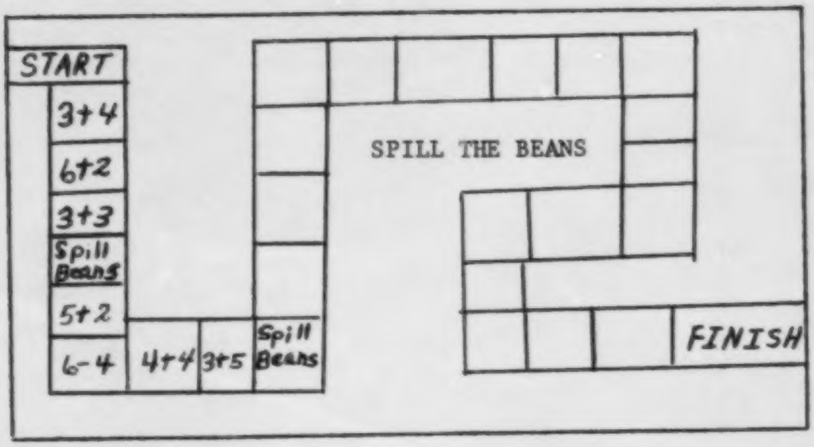
1
2

SPILL THE BEANS

Materials: 12" x 24" piece of poster board
1 cube

Procedure: Mark the cube with the numerals 1 - 6. Construct a game board on the piece of poster board as shown in the illustration below.



INSTRUCTIONS FOR SPILL THE BEANS

1. Each child throws the cube and moves the number of spaces shown on the face of the cube.

2. If the child lands on a problem he does not have to answer it.

3. If the child lands on a "spill the beans" space he must answer all the problems found on the spaces between the two spill the beans spaces.

    a. If the child misses any of the problems he must return to the previous spill the beans space.

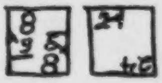
    b. If he answers all the problems correctly he remains on the spill the beans space.

4. The first child to the finish space is the winner.

SPOONS OR OLD MAID

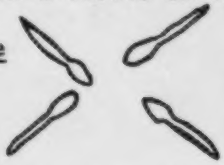
Materials: 52 3½" x 2½" cards
Spoons (1 less than the number
of players you have.
Make a deck of 52 cards with problems and answers.

Example



Procedure for Spoons: Arrange spoons in a circle in the middle of the table.

Example



The dealer deals out four cards to each player. The object of the game is to get two matches (a match is a problem and the answer) and to take a spoon trying not to let the other players see you take the spoon.

After the dealer deals out the cards he draws a card off the stack of remaining cards. He checks the card to see if he needs it in his hand to make a match. If he doesn't need the card he passes it face down to the next player to his left. If he does need the card he puts it in his hand and discards one he doesn't need passing it on to the next player. He draws again as soon as he passes the card on to the next player. Once a player has his two matches and takes a spoon the other players can take a spoon when he notices a spoon has been taken. Anytime a player takes a spoon it is more fun if he tries not to let anyone see him take it. Play continues until the player without a spoon notices that all the spoons are gone. The game can sometimes go on for quite a while before the player without a spoon notices they are all taken.

Every player that gets a spoon gets a point.

The next player is the dealer and the game starts over.

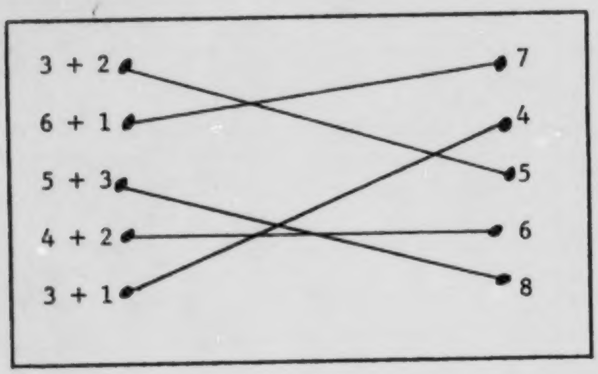
Old Maid Procedure: Use the same deck of cards except put 1 more card in with Old Maid on it.

The dealer deals out all the cards one at a time. Each player checks his cards to see if he has any books (a book is a problem and a answer). He lays his books on the table in front of him. The player to the left of the dealer draws from the dealer. Then the player to his left draws a card from him. Each time a player draws a card he checks his hand to see if he can make a book with the card he drew. When a player is out of cards he is out of the game. The player left with the Old Maid is the loser.

STRING-O-MATH

Materials: 18" x 18" piece of cardboard or heavy tagboard
pieces of yarn or shoestrings

Procedure: Write problems on one side of the cardboard and randomly write the answers to these problems on the other side. See illustration below. Attach the yarn or shoestrings to the problems. Punch a hole next to each answer.



INSTRUCTIONS FOR STRING-O-MATH

1. Give the child a string-o-math board.
2. Ask the child to match the problem to its answer by taking the yarn that has been attached to the left side of the board and push it through the hole next to the correct answer (see the above illustration).

TRACK IT DOWN

Materials:

gameboard (see illustration)
45 cards (5 sets of the number 1-9) (2cm x 4cm)
2 markers

Instructions:

Each player chooses one of the feet and draws two cards from the draw pile.

The player with the lowest sum plays first. These cards are then returned to the draw pile.

The first player chooses the game goals and places markers on the high or low space under both quotient and product to make sure players remember game goals.

These goals may be:
1. low product, low quotient
2. high product, high quotient
3. low product, high quotient
4. high product, low quotient

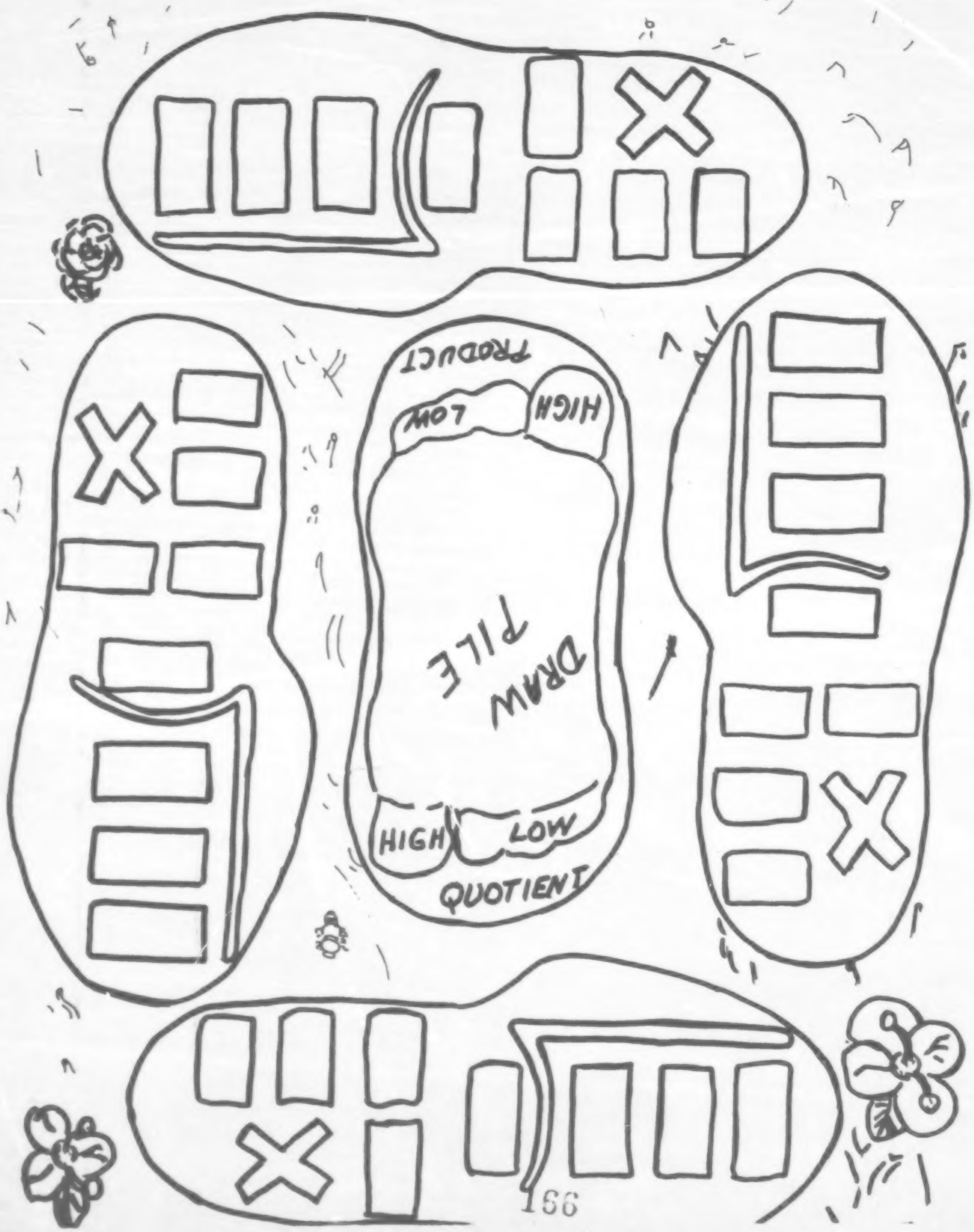
Each player takes turns drawing two cards and places them in their empty playing areas.

After each player has taken four turns all areas will be filled.

Each player then finds the product or quotient of his or her problems.

Player compare answers and find scores with these rules:
1. Score 1 point if you made either one of the game goals.
2. Score 3 points if you made both of the game goals.

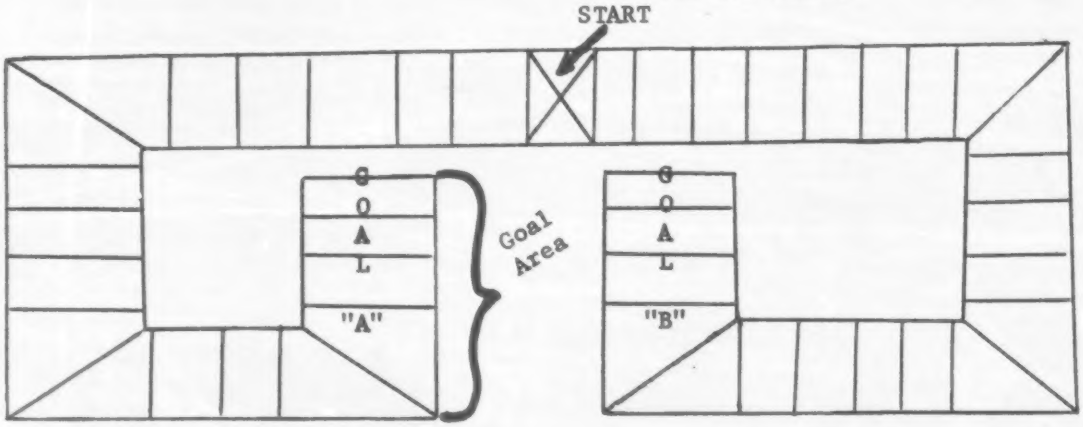
Play the game as many times as time permits. Person with the highest score is the winner.


PRODUCT
HIGH
LOW
DRAW
PILE
HIGH
LOW
QUOTIENT
X
X
X
X

Tug of War

Materials:
1-24" x 36" piece of cardboard or tagboard
1-cube
1-set of 3" x 4" pieces of tagboard (25)
1-set of magic markers of different colors

Procedure: Construct the game board as shown in the illustration below. Color the squares using alternating colors. Use 4 or 5 different colored magic markers. The cube is used as the rope. The objective of the game is to get the cube to your goal and remain there 3 consecutive turns.



Instructions for Tug of War

1. The student or team that is able to keep the cube in their goal 3 consecutive turns wins the game.
2. Each person or team decides the direction in which they will be moving.
3. Place the cube on the start square.
4. The deck of 25 cards is placed face down.
5. Each person or team draws a card from the deck.
6. The two students respond by each giving the answer to their problem.
7. If both students give the correct answer, the smallest answer is subtracted from the largest answer.
8. The student having the largest answer is allowed to move the number of spaces of the difference of the answer. Example - my answer was 6, yours was 8, so you move 2 spaces.
9. If one of the students gives an incorrect answer, the other student is allowed to move 1 space toward his/her goal.
10. Only one cube is used, so it will move back and forth like a rope in a regular game of tug of war.

Frac/tions,

0.Decimals

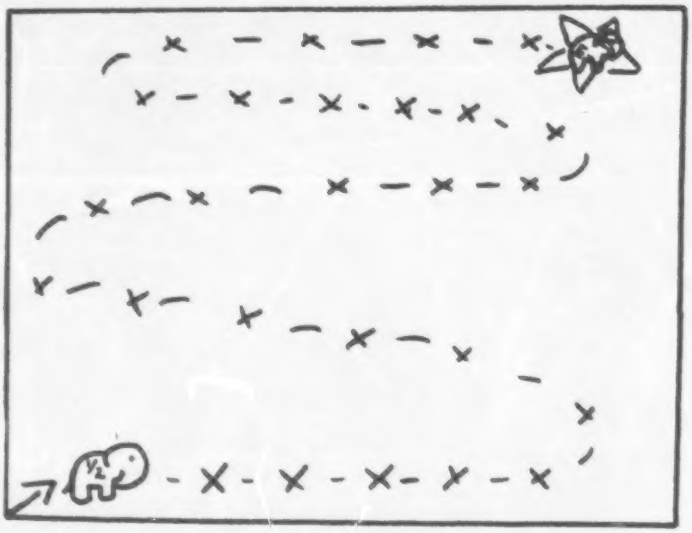
Frac/tions

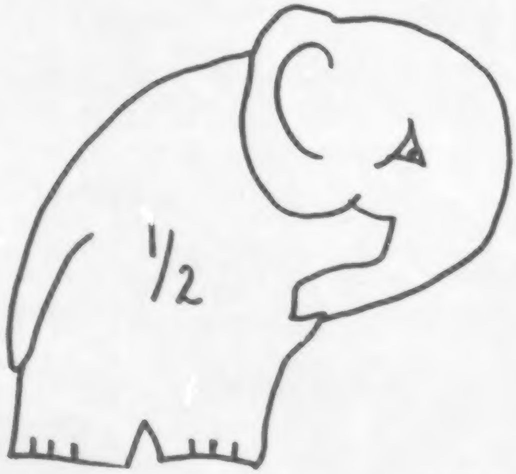
ELEPHANT WALK

Materials: Follow the construction directions for the basic step-a-set game board.

Procedure: Place elephants showing fractional numbers randomly on the path. The finish line could be an elephant inside a star. Playing pieces could be ivory tusks, etc. Make one deck of cards showing fractions.

Instructions: The student rolls the number cube. If the pupil lands on an elephant he has to "ride out" that turn. If he lands on a blank space, he draws a card and moves his playing piece to the elephant having the same fraction. (Note: This may involve moving backwards.) The first one to reach the starred elephant is the winner.





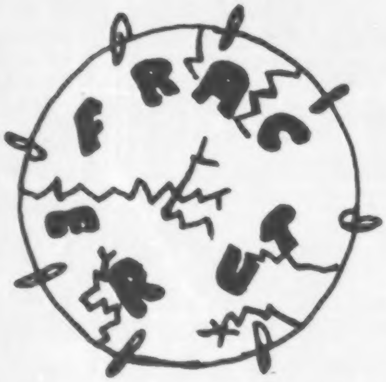
FRACTURE

Objective: Create interest in learning to add and subtract fractions. (Works best with 6-10 players, decrease this number for remedial students.)

Materials:
1-10 inch pizza rounds for each fracture board
8 paper clips for each fracture board
6 different colors of construction paper
1 blank cube

Construction:

1. Place the 8 paper clips equal distances around the pizza round by sticking the long prong of the paper clip into the pizza round (a drop of glue may help hold this prong).



2. Repeat the above process for as many boards as you wish to make.
3. Decorate each fracture boards to suit yourself. Here's one idea.
4. Cut up the different colored pieces of construction paper into 10" circles. Cut each circle into equal fractional parts. (Example green--halves, blue--fourths, etc.) 1/2's, 1/3's, 1/4's, 1/6's and 1/12's work well.
5. Write the denominators of the different fractions on the faces of the cube (2, 3, 4, 6, 8, 12).

Procedure:

1. Each player rolls the cube and places the fractional part, designated by the denominator on the top face of the cube, on his fracture board. (e.g., If the player rolls a 4, he gets the fractional part 1/4. The play rotates around the table.
2. Several times during the game the teacher or aid should ask the players, what fractional part of the circle they need to complete their circle and win the game.
3. The first student to "exactly" complete his circle is declared the winner. The sum of his fractional parts should equal exactly one. (e.g., 1/2, 1/8, 1/8, 1/4)

Variation:

1. With your more proficient fraction adders, require them to compute the sum of the fractional parts on their board after each play. This way they will know exactly what fractional part they will need to complete their circle and win the game.
2. Make a small deck of cards having fractional problem on them. Allow the students the opportunity to answer these fractional problems, if they roll a certain number on the cube. The reward for a correct answer being a fractional piece of their choosing for their fracture board.

FREAKY FRACTIONS

Materials:

- 22" x 28" piece of cardboard
- beans, quiet counters or pop bottle lids to serve as covers for student board
- 8" x 8" game card for each child (like an individual bingo card)
- number cube

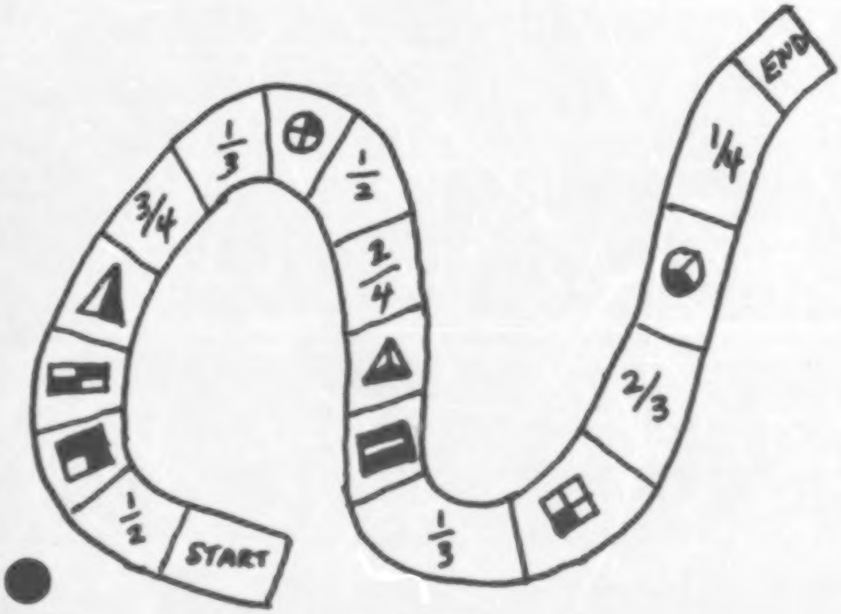
Procedure:

A pathway is drawn on the game board. The pathway spaces are marked randomly with illustrations of fractional parts or fractional numbers.

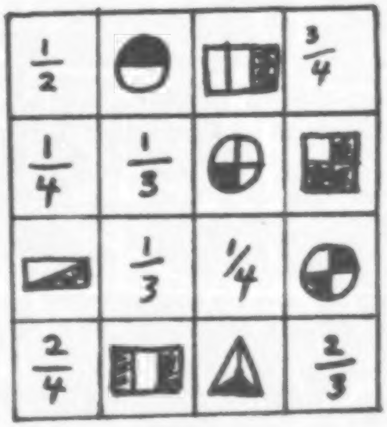
The individual pupil cards are marked into 16 squares. The squares are marked randomly with illustrations of fractional parts and fractional numbers. See the illustration below.

Instructions:

Each pupil rolls the cube and moves that number of spaces on the game board. The student must identify the fraction associated with the space upon which he has landed and he must find its match on his board. (i.e. If he lands on the illustration for 1/3, he covers the fractional number 1/3 on his own board. If he lands on the number 1/3 he reverses and covers the illustration for 1/3 on his own board.) The winner of the game will be the student who gets to the end of the pathway first or gets four squares in a row covered on his board.



STUDENT BOARD



STUDENT BOARD

IS IT??

Materials: Follow the construction directions for the basic step-a-set game board.

Procedure: The steps on the pathway are geometric figures which have been divided into fractional parts. (circles, squares, triangles, rectangles, etc.)

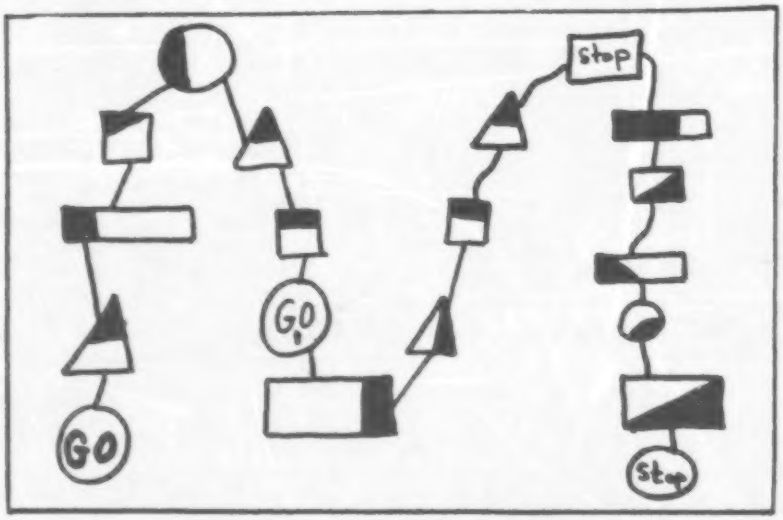
Instructions: Each pupil in turn rolls the number cube and moves that number of spaces on the game board.

He identifies the geometric shape and answers the question "Is it divided into halves"?

The pupil receives 1 point for identifying the shape correctly and 1 point for answering the problem correctly.

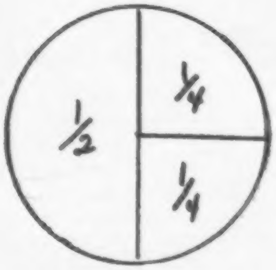
The child with the most points at the finish wins the game.

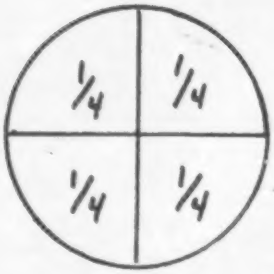
NOTE! The game could be changed by asking the question "Is it divided into thirds, fourths, etc."

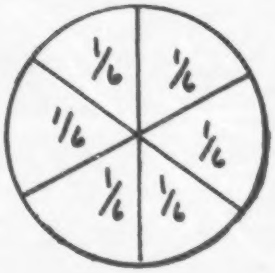


MAKE YOUR PIE

Materials:	pizza rounds magic marker
Procedure:	Make as many pies as you have children. Cut some of the pies in 1/2, 1/4, 1/6, 1/8
Instructions:	Have the children put the pies together anyway they want. Ask the child to pick up 1/2 of pie in his left hand and 1/4 in his right hand. Now have him put both pieces together on the table and ask how much of a pie there is. Because its not ceonvenient to say "I have one-half of a pie and one-fourth of a pie, have the student place two one-fourth slices on the top of the one-half slice to determine equivalence. This substitutes the two one-fourth slices for the one-half slice. Now by simply counting the pieces, one-fourth, two-fourths, three-fourths we arrive at the solutions, etc.

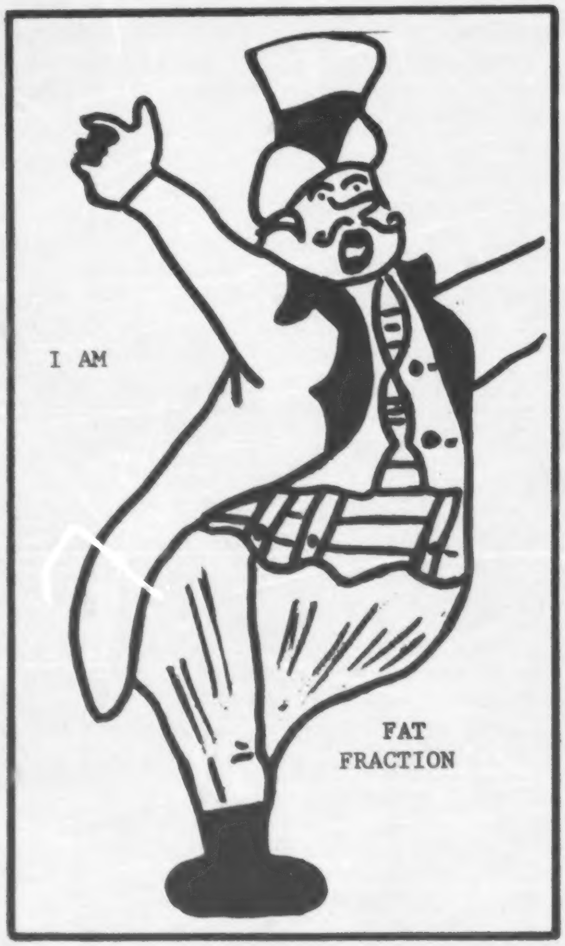


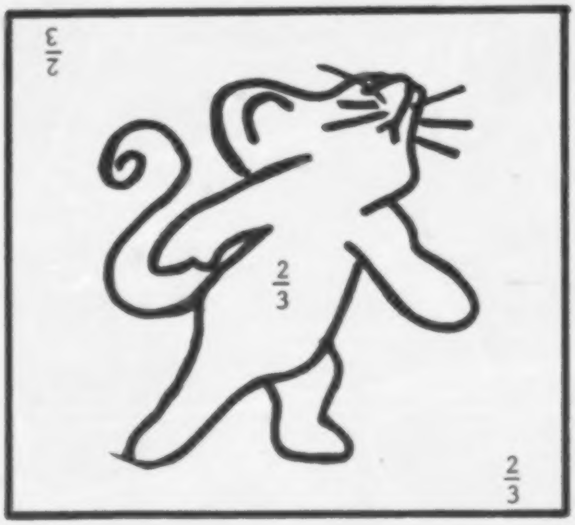


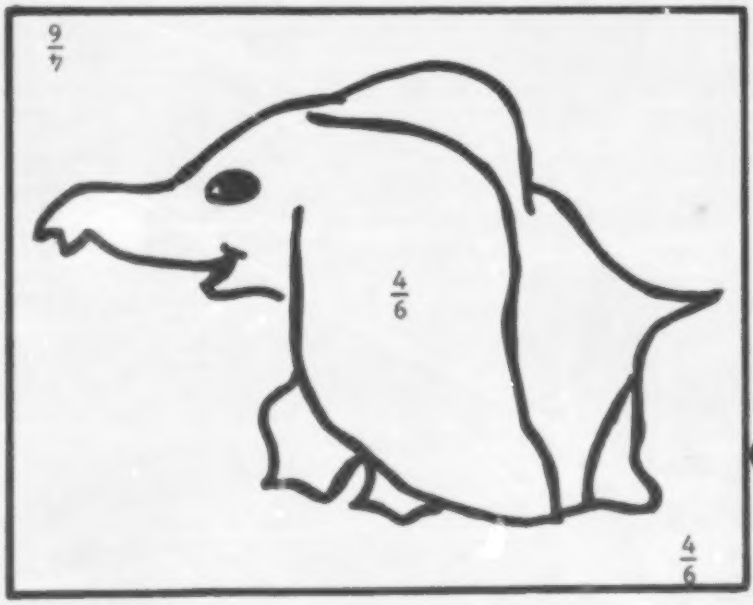


MATCH FAT FRACTIONS

Materials:	24 Elephant cards (unreduced fractions, e.g., 4/6) 24 Mouse cards (reduced fractions, e.g., 2/3) 1 Fat Fraction Card
Procedure:	Cut out cards in suggested shapes as indicated below. Match each "Elephant" problem card to a "Mouse" answer card.
Instructions:	Deal out seven cards to each player. The rest are placed in the center, face down. Pairs are "booked." The pupils take turns drawing from the center pile and discarding (as in rummy). There will be two winners--the one with the most pairs and the holder of the "Fat Fraction" card.







NOTE: This game can be adapted for other concepts whenever you are able to put problems on one card and answers on another.

PEANUT BUTTER AND JELLY GAME

Object: Make a complete peanut butter and jelly sandwich. First one to finish is the winner. (2, 3 or 4 players)

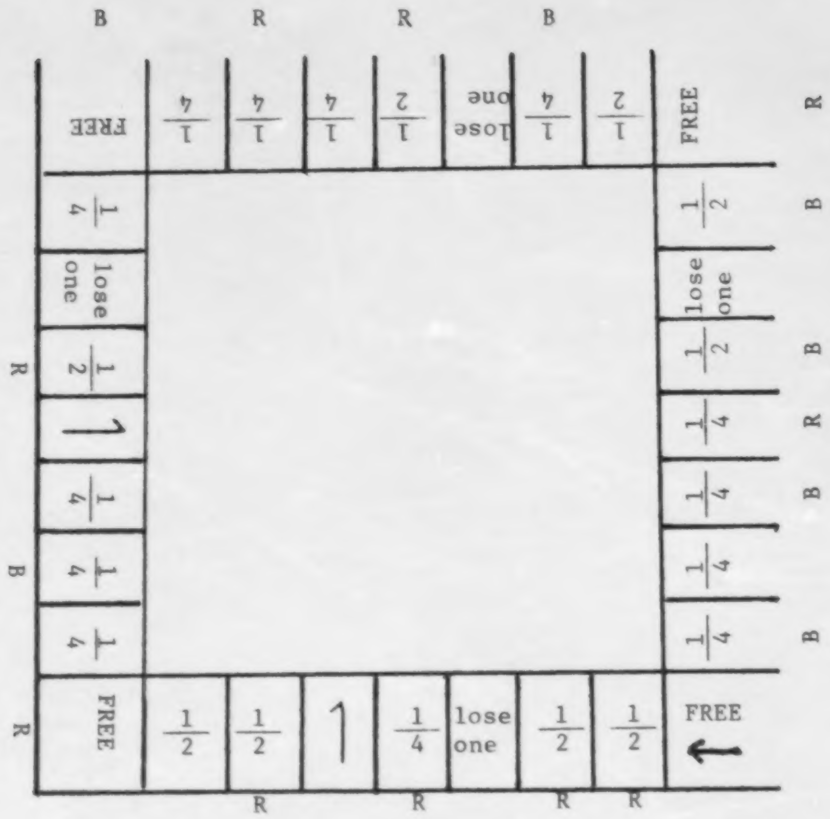
Materials: 4 movers, spinner, white, brown and red 2½" cards
white squares - 8 whole ones, cut four into halves and four into fourths
brown squares - 4 whole ones, cut four into halves and four into fourths
red quares - 4 whole ones, cut four into halves and four into fourths

Procedure: Color space on board - white for bread, brown for peanut butter and red for jelly.

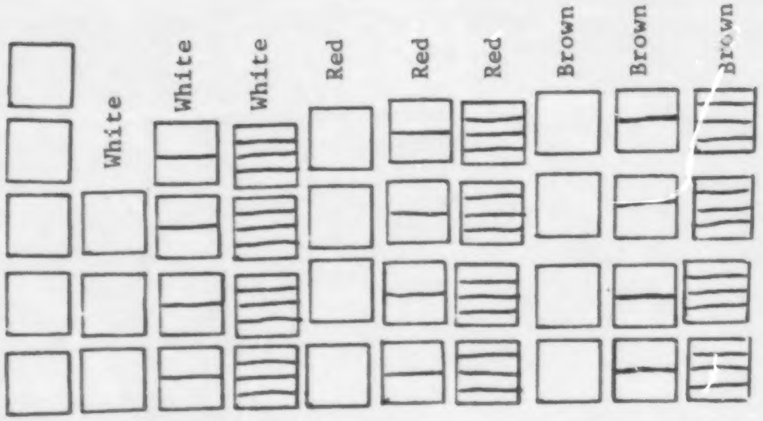
Instructions:

1. Place cards in center of board
2. Each player selects a mover and places it on the space with black arrow.
3. A player is selected to be first. The player advances his or her mover to the first space having the background color indicated on the spinner.
4. A player may take one piece of the kind and size shown on the space on which he or she lands, provided player has a place to put it.
5. Sandwiches must be made in proper order.
6. No player may take a piece unless it can be used at that time.
7. Colors cannot be mixed in the same layer.
8. If a player lands on a space showing more than needed, player may take any piece up to the size shown.
9. If a player lands on a "lose a piece space", the player must return any one fully exposed piece, (the piece cannot be partially covered).
10. If a player lands on a "free space", player may take any one piece of the color shown if player can use it. The player loses a turn if a wrong piece is taken. The player gets to take another turn if the correct piece is taken.

PEANUT BUTTER AND JELLY GAME


B
R
R
B
FREE
1/4
1/4
1/4
1/2
lose one
1/4
1/2
FREE
R
B
lose one
1/2
1
1/4
1/4
1/4
B
R
B
R
B
R
B
FREE
1/2
1/2
1
1/4
lose one
1/2
1/2
FREE
R
R
R
R

B - Brown   R - Red


White
White
White
Red
Red
Red
Brown
Brown
Brown

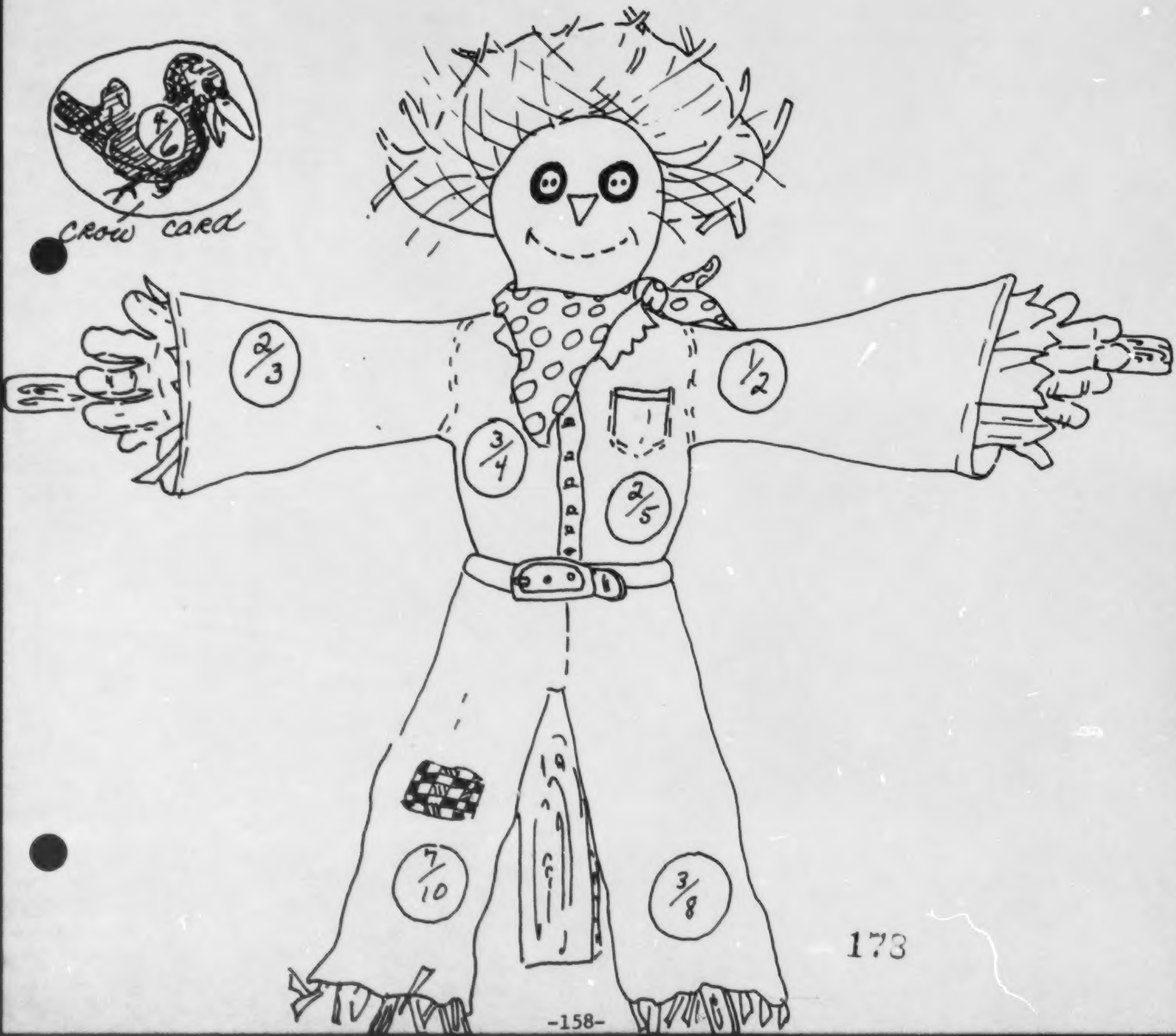
SCARECROW SET UP

Materials:

scarecrow
crow cards

Procedure:

Each fraction has many names. Place the crow cards on a magnet by the fraction with another name. To check your matching turn each set of crow cards over and they spell the name of an animal.



SPACE CRAZE

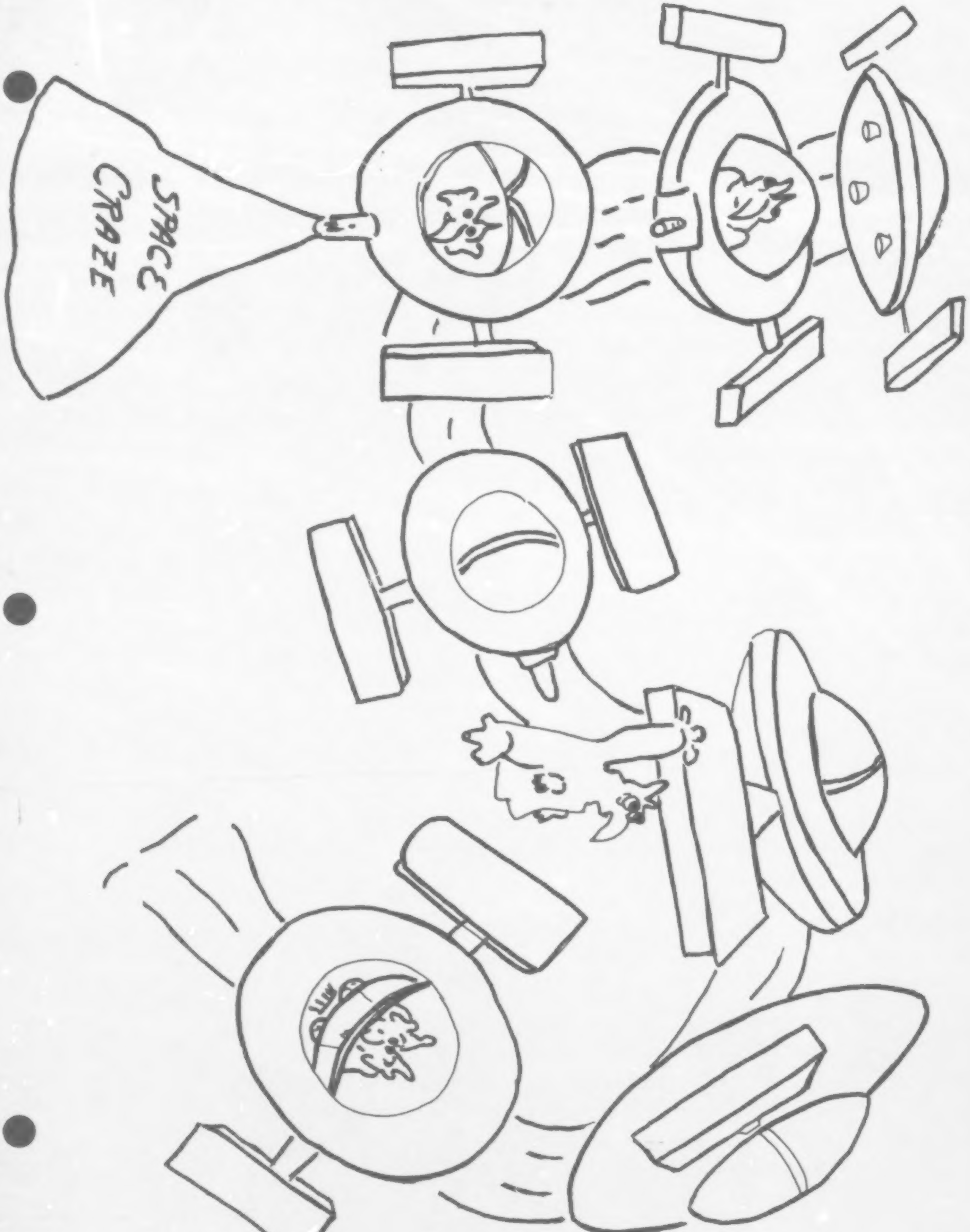
Materials: 1 game cube labeled 1/2, 1/3, 2/3, 1/4, 3/4
4 game markers
playing board as illustrated

Instructions:

Roll the cube to see who begins. The player with the highest fraction plays first. Take turns rolling the cube. Player moves the marker to the next space that shows a picture of a fraction equal to the fraction rolled. If you cannot move the marker, you lose that turn.

1/2 5/8

If you land on a space occupied by another player, the other player may be moved back 2 spaces. First player to reach the winner ship wins the game.


SPACE CRAZE

00.Decimals

DECIMAL DASH

Materials:

Decimal Dash playing pieces (see pattern)

One Decimal Dash playing board per player (see pattern)

One special dies with faces labeled:
.1, .2, .01, .02, .03 and .04

Instructions:

2 to 4 players and one banker who is a non-player

Consider the playing board to represent one whole unit.

Consider the small squares to each represent one hundredth of the whole unit.

Consider the strips to each represent one tenth of the whole unit.

Follow the directions below to play the game:

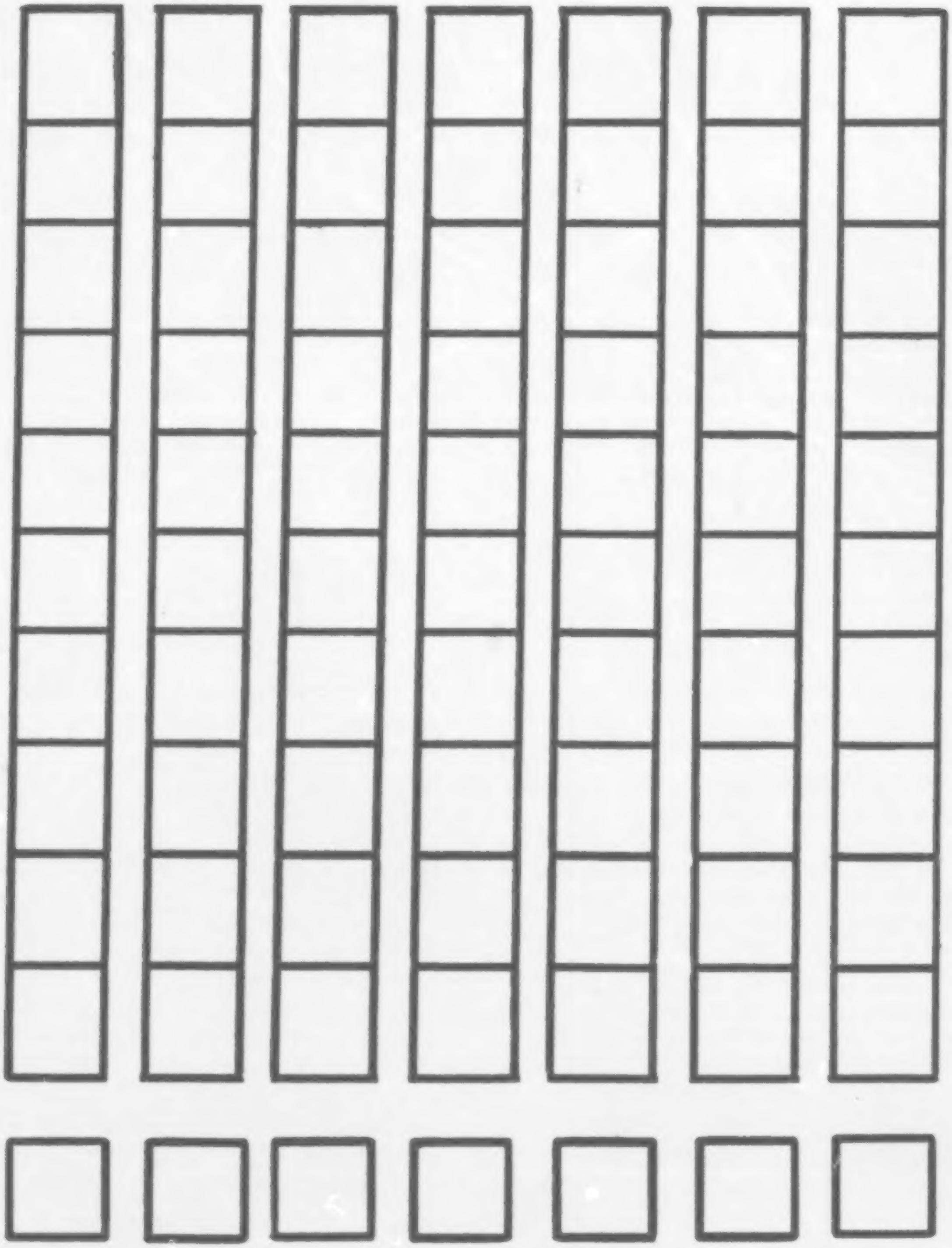
1. Player one rolls the die and asks the banker for the playing pieces represented by the roll. He or she places the pieces won on own playing board.
2. Player two, and other players in turn, do the same.
3. Players continue taking turns rolling the die, taking playing pieces, and placing them on their playing boards. (Players will need to trade 10 hundredths for 1 tenth when appropriate.)

   The first player to completely cover his or her playing board wins the game.

This game can also be played with 2 dice, in which case the players are requested to make addition number statements before taking the required playing pieces.

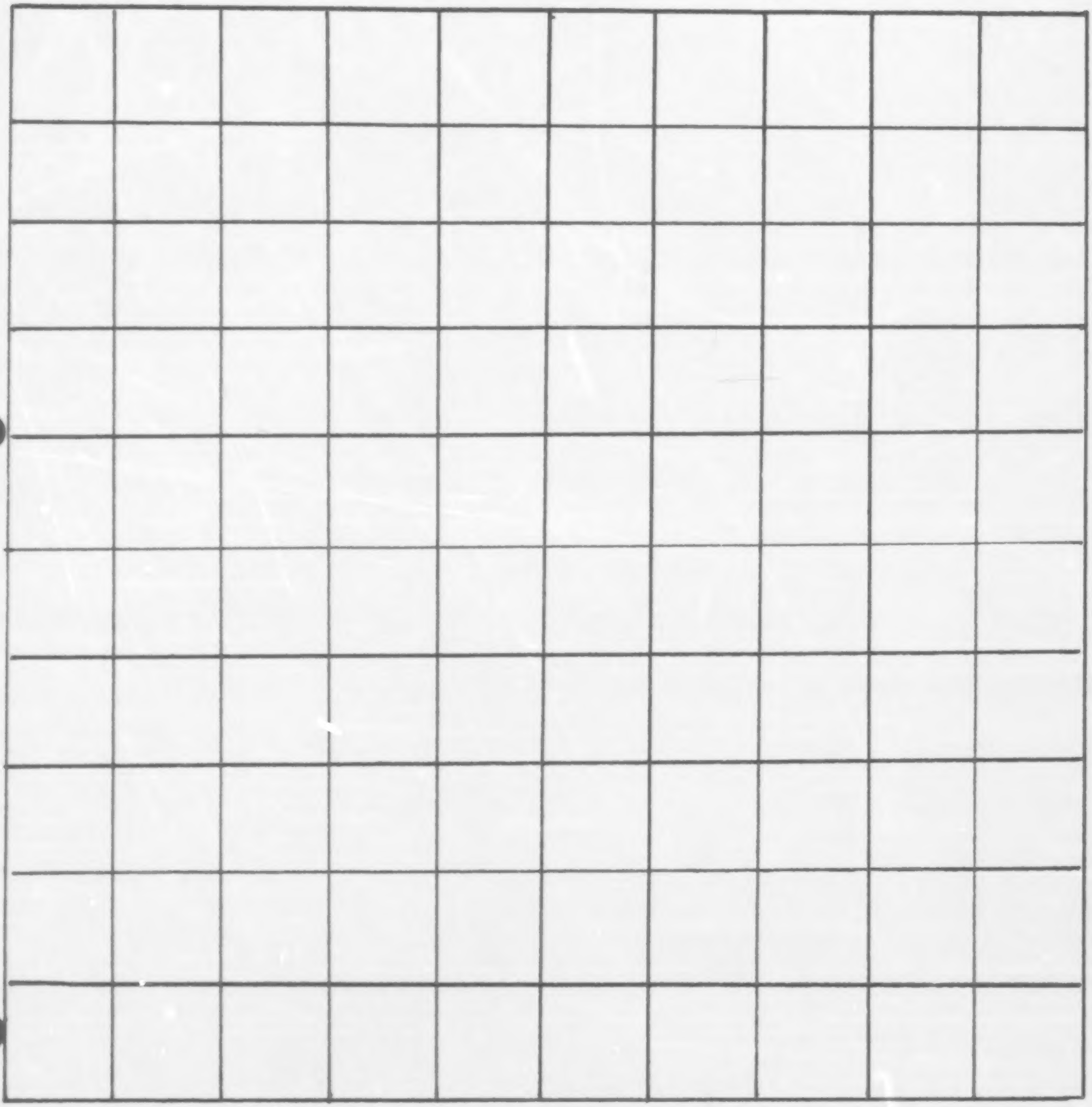
Playing Pieces for Decimal Dash

Reproduce 6 copies of this page on poster board.



Playing Board for Decimal Dash

(Reproduce 1 board per player)



DRAW FOR ONE WHOLE (decimals)

Materials: set of about 28 tiles

18 marked .01
10 marked .1

score sheets

Instructions: 2 to 5 players

Place tiles face down on table

Each player in turn:
1. draw 5 tiles
2. place tiles on playing board
3. read aloud the total value of the tiles
4. record that total on score sheet
5. return tiles, face down, to set of tiles on table and "mix" them up a bit

Each time a player has a turn, repeat procedure and add that total to previous total earned by that player.

Winner is the first person to reach a total of one whole.

Draw for One Whole

tenths	hundredths

Draw for One Whole

tenths	hundredths

Geometry

GEO BOARD

Materials:

6" x 6" piece of 1/2" plywood
5" x 5" paper grid using 1" units
box of 5/8" lino nails
hammer
rubber bands in different colors

Procedure:

The plywood is sanded and painted. You could cover the board with contact paper. The grid is then put on top of the plywood. Nails are hammered into the grid to complete the geo board. Half of each nail should be left exposed. When the paper grid is torn off, the geo board is finished.

Instructions:

You can use the geo board to reinforce the concepts of addition, subtraction, multiplication and Division. See the examples below.

Addition - $4 + 3 = \square$ could be represented on the geo board by banding 4 nails with one rubber band and 3 nails with a second rubber band. The sum would be the number of nails enclosed by the rubber bands.

Subtraction - $8 - 3 = \square$ could be represented on the geo board by banding 8 nails with one colored rubber band and then band 3 of these nails with a different colored rubber band. The difference would be the number of nails within the first set not banded by the second rubber band.

Multiplication - $3 \times 4 = \square$ could be represented on the geo board by banding an rectangular array of nails having the dimensions 3 nails by 4 nails. The product would be the number of nails enclosed.

Division - $12 \div 3 = \square$ could be represented on the geo board by banding 12 nails and then banding these nails into 3 equal sets. The quotient would be the number of nails in each set.

*Geo boards may also be used in the study of graphing and geometry.

GEOMETRY HOKEY POKEY

(Grades 1-3)

Here is a fun activity for all first and second grade boys and girls. You will want to make it a part of your geometry teaching.

You put your circle up
You put your circle down
You put your circle up
And you give it a good look.
You see that it is round
Then you put it right back down,
That's what it's all about!

You put your square up
You put your square down
You put your square up
And you give it a good look.
You see that it's four sided
It's a square, you've decided,
That's what it's all about!

You put your triangle up
You put your triangle down
You put your triangle up
And you give it a good look.
And "Tri" means three plus angle
That's where we get triangle!

You put these shapes up
Into an envelope
You put the envelope down
And now look all around.
You see geometry
Can be learned so easily
And that's what it's all about!

HUCKLE-BUCKLE BEANSTALK

Materials: 1 - fun hideable object

INSTRUCTIONS FOR HUCKLE-BUCKLE BEANSTALK

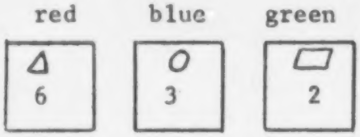
1. Select one child to hide the object in a viewable position while the other children cover their eyes.
2. The remaining children then search the room for the object.
3. When a child views the object, he says "Huckle Buckle Beanstalk" and returns to his seat.
4. The other children continue to search for the object until they view it and say "Huckle Buckle Beanstalk."
5. Discuss with the children the location of the object in relation to "near" or "far."
6. Repeat the activity with a variety of objects (perhaps geometric shapes).

NUMBER SHAPE-CO

Materials: 12" x 15" pieces of tagboard
4" x 6" pieces of tagboard

Procedure: Rule the large pieces of tagboard into three columns and five rows. Draw a geometric shape in each space of the top row. Color the shapes with different colors, so no two cards are the same. Below each shape write a numeral from 1 - 10. (See illustration below.) Make the small cards to correspond to the numeral and colored shape.

△	▱	○
3	8	10
4	2	5
6	4	7
1	9	3



Make enough cards for all to play.

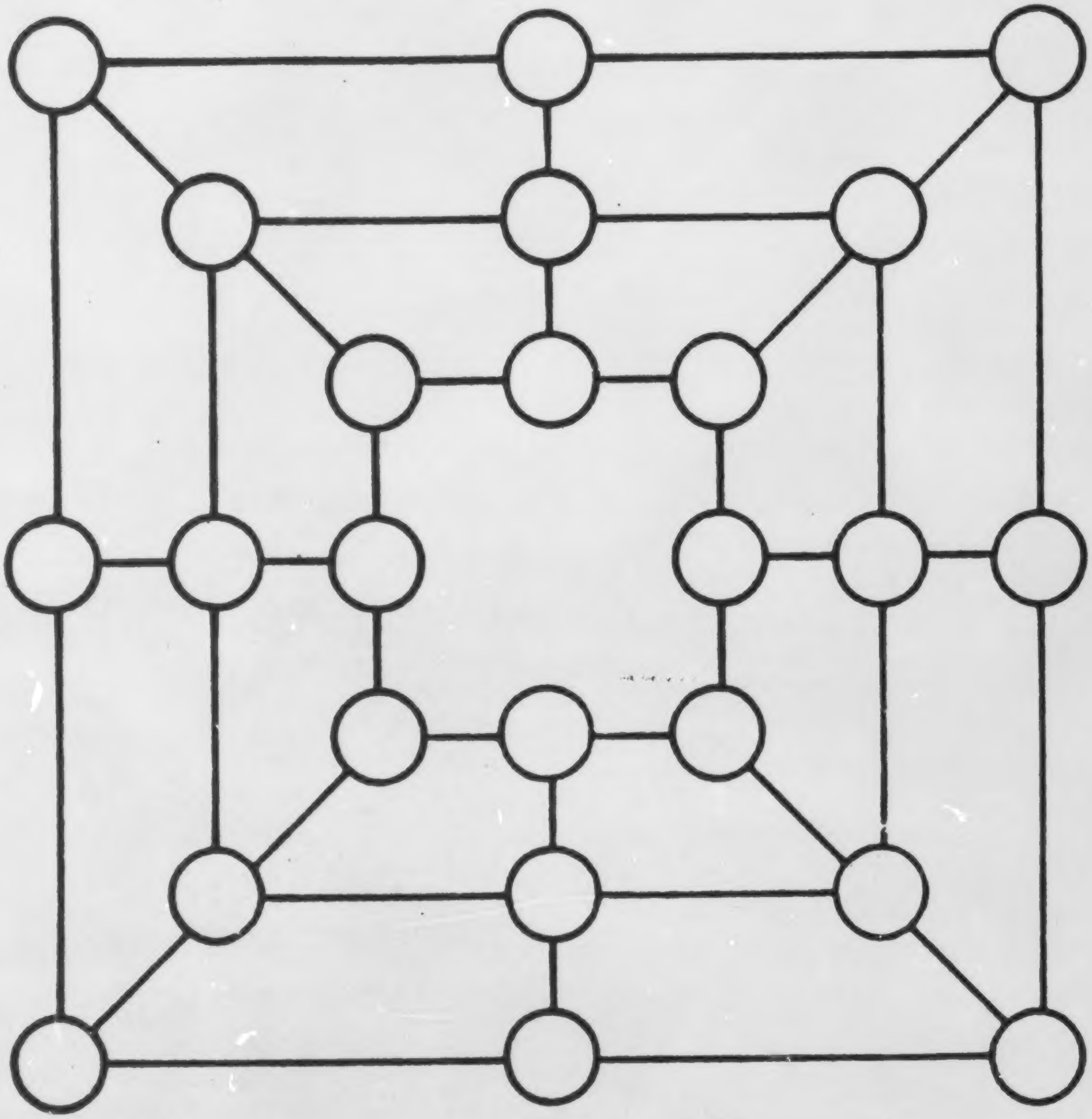
INSTRUCTIONS FOR NUMBER SHAPE-CO

1. Give each child a number shape-co card.
2. Give each child a set of covers for his card (beans, discs, bottle caps, etc.).
3. Place the small cards in a box. Draw out cards from the box, one at a time.
4. Require a child to call out the shape, color and numeral that is on the card.
5. Each child covers the numeral on his card, if he has it under the correct colored shape.
6. The first child to completely cover his card is the winner.

O - GE - O

(Geometric Shapes)

Materials:	Railroad Board or Pellon 24 cards 4 sets of markers
Procedures:	Outline the game board as pictures. In each of the 24 circles, draw a geometric shape (some may be repeated). Use same shapes on the 24 cards.
Instructions:	Player draws a card. If they can identify the shape, they cover it with one of their markers on the game board. Player marking the most shapes is the winner. Bonus points can be earned by covering three shapes in a row.



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PATTERN SNAKE

Materials:

20" x 24" piece of tagboard
set of 2" x 3" cards showing patterns
set of markers

Procedure:

Make a game board as shown in the illustration below. ○'s, ♡ 's, and ✡ 's are made with a red magic marker. □ 's, △ 's, and ▭ 's are made with a blue magic marker.

EXAMPLE OF PLAYING CARDS

○△○△○

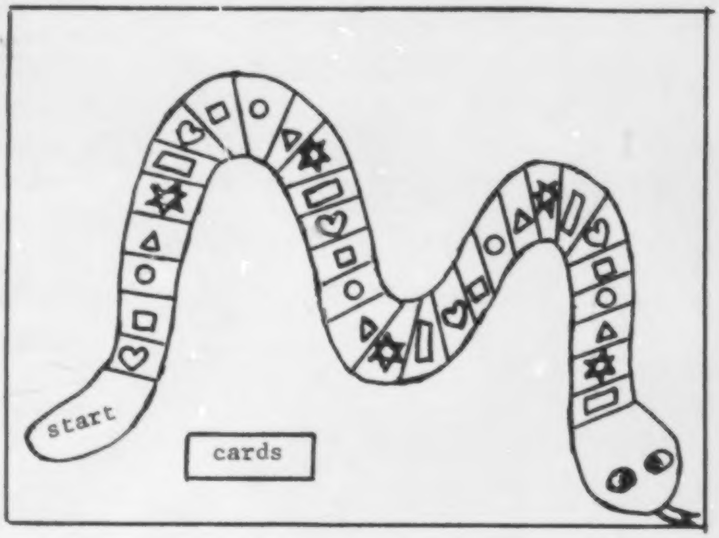
(correct answer = △)

○♡□○♡

(correct answer = □)

△♡✡△ | _ ✡

(correct answer = ♡)



Instructions:

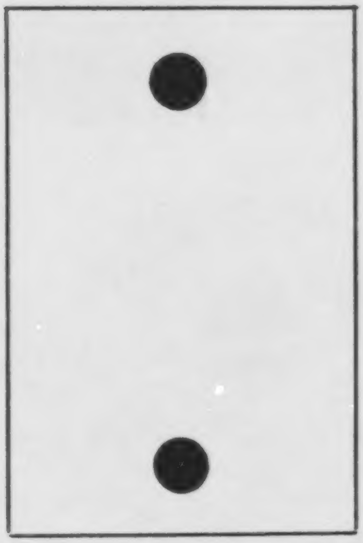
1. Markers are placed on the "start" space to begin the game.
2. Each player draws a pattern card from the deck on the game board and adds one more shape (verbally) to the existing pattern.
3. With each correct answer, the player advances to the shape he has added on to the pattern. (He tells which shape comes next for the pattern).
4. The player that reaches the head of the snake first is the winner.

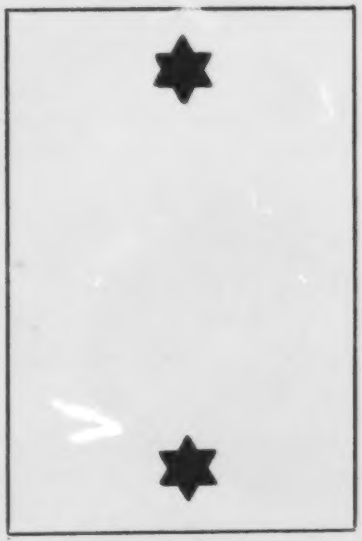
RUMMY - GEOMETRIC

Materials: 56 - 3" x 5" cards with the following shapes on them. (There are two shapes on each card.)

- 4 yellow circles
- 4 red circles
- 4 red hearts
- 4 blue hearts
- 4 yellow diamonds
- 4 green diamonds
- 4 blue triangles
- 4 blue squares
- 4 green squares
- 4 green rectangles
- 4 orange stars
- 4 orange rectangles
- 4 blue stars
- 4 brown triangles

Procedure: Each player is dealt 4 cards, the remaining cards make up a deck called the "Bone Pile." They are placed in a stack upside down between the players. The object of the game is to form books. A book consists of two cards having the same shape and color. The first player starts the play by drawing a card from the "Bone Pile." If he has cards that make up a book, he announces his book by telling the color and shape of the figures on the cards. He places the books in front of him and discards one card from his hand, then play continues around the group. When one of the players is able to form books for all of his cards, he is declared the "First Place Winner."





SHAPE-CO GAME

Materials:

9" x 9" pieces of tagboard
3" x 3" pieces of tagboard
counting discs

Procedure:

The 9" x 9" tagboard cards are divided into nine 3" squares. One of the following shapes is placed in each square (△ , ○ , □).

The shapes are put in the squares in a random fashion. In order to distinguish between the congruent shapes on the board, they should be given different colors. A set of flash cards, showing the different-colored shapes, is prepared.

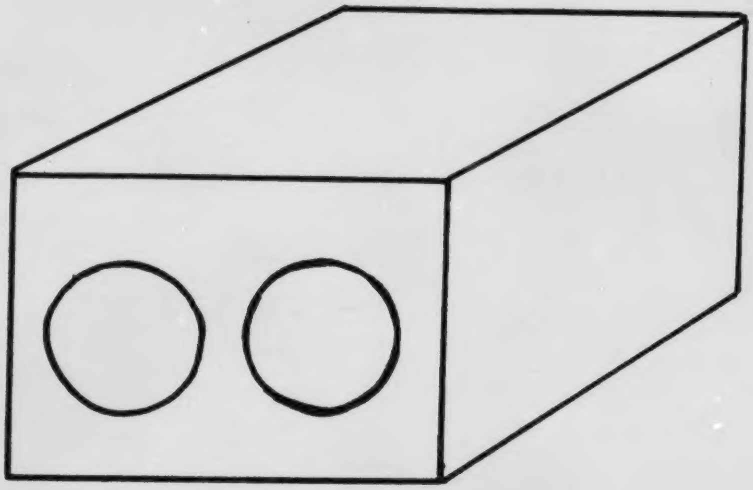
INSTRUCTIONS FOR SHAPE-CO GAME

1. Each child is given a "Shape-Co" board.
2. He also gets a set of counting discs.
3. One of the cards showing a colored shape is flashed to the class.
4. The child covers all of the colored shapes on his board (congruent to the one on the card).
5. The first child to get three discs in a row says, "Shape-Co", and wins the game. The teacher should check the child's board to see if he has covered the correct shapes.

TACTILE BOX

Materials: one cardboard box (top included)

Procedure: The box is covered with construction paper. A hole large enough for a child's hand to pass through is cut in one end of the box. (Another pssibility would be to cut two holes in the box so the child could place both of his hands in the box at the same time.) (Place textural objects as wood chips, hair roller, rocks, pieces of rope, etc.)



* **Variation:** PANDORA'S GOLDEN LIFESAVER
Label each item with a math problem. Attach "scary" signs on box (i.e., "It Got Me," "Help," "Will it Bite," etc.)

Measurement

Linear

HIDDEN WORDS

Each of these eight words are hidden in the puzzle below. Find each word and put a ring around it.

1. metric
2. system
3. meter
4. centimeter
5. length
6. distance
7. measure
8. symbol

A	M	E	A	S	U	R	E	C	D	E
B	E	F	I	J	R	S	Y	A	B	M
G	T	H	S	Y	M	B	O	L	C	E
K	R	L	Q	T	W	X	L	Z	D	T
M	I	N	P	U	D	V	L	E	F	E
O	C	E	N	T	I	M	E	T	E	R
G	H	I	J	B	S	M	N	K	L	N
S	T	Z	A	Y	T	O	G	P	Q	R
U	C	D	S	Y	A	F	T	O	O	P
E	V	T	W	X	N	G	H	S	B	C
J	E	M	N	E	C	H	A	D	I	L
M	I	K	L	F	E	K	H	G	M	J

200

INCHWORM

Materials:

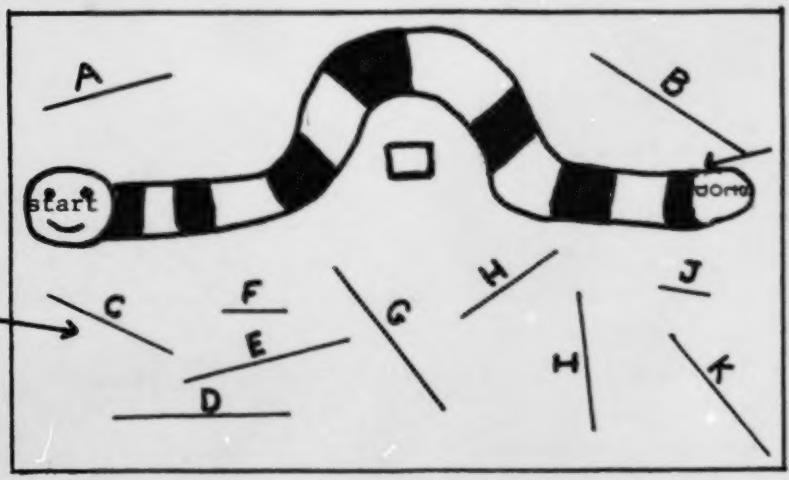
poster board or something to make the gameboard
black magic marker
one other color magic marker
deck of 2 x 3 measuring cards

Procedure:

The cards should read, measure line A and move ahead _?_ spaces. At least two cards for the same line segment should be made, each giving a different number of spaces to move ahead. The cards may be coded for 1/4, 3/4 and 1/2"

Instructions:

A cube marked with 1, 2 or 3 is rolled and the proper number of spaces is moved. If the student lands on a colored section, the student draws a card from the deck. The student then measures the indicated line segment and if measured properly, moves ahead the indicated number of spaces. The student may continue to move if he lands on another colored space, until he makes a mistake in measuring or lands on a blank space. The first player reaching the worms tail is the first winner, etc.



colored spaces at random on section

Line segments of different lengths.

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INCHY

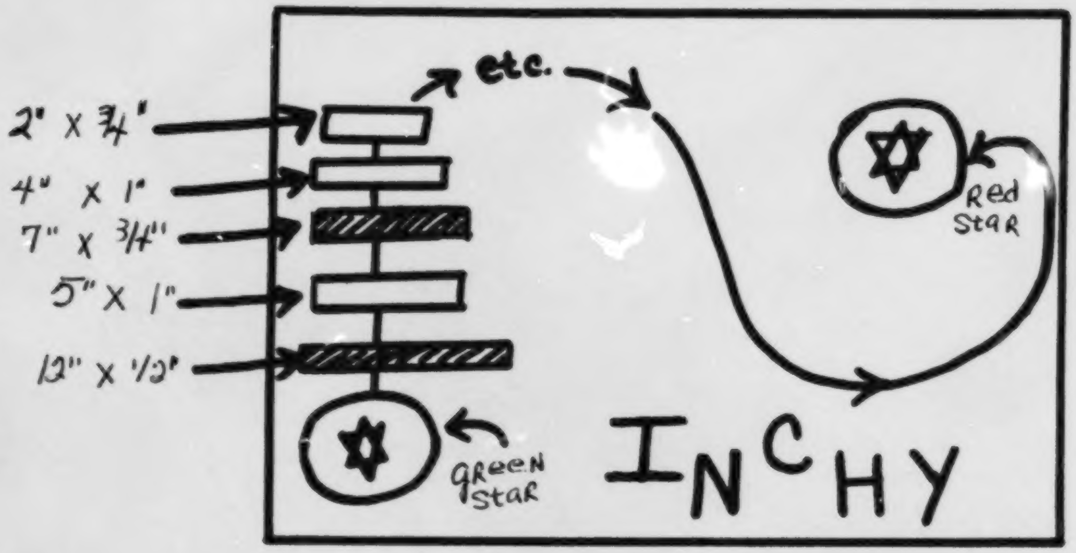
Materials:

game board
magic markers
rulers
cardboard

Procedure: Cut up the cardboard into rectangular shapes. Make the lengths whole numbers of inches (1" - 12"). See the illustration below. Glue the shapes onto the board to form a pathway. Shade 2 or 3 of the rectangles.

Instructions: The child rolls a number cube and moves the correct number of spaces on the game board. Using a ruler, he must find the length of the rectangle upon which he has landed. If he measures the length correctly, he remains on the rectangle. If he does not find the correct measure, he must move backways 2 spaces. If the student lands on a shaded rectangle, he is allowed an extra turn. The first student to the red star is the winner.

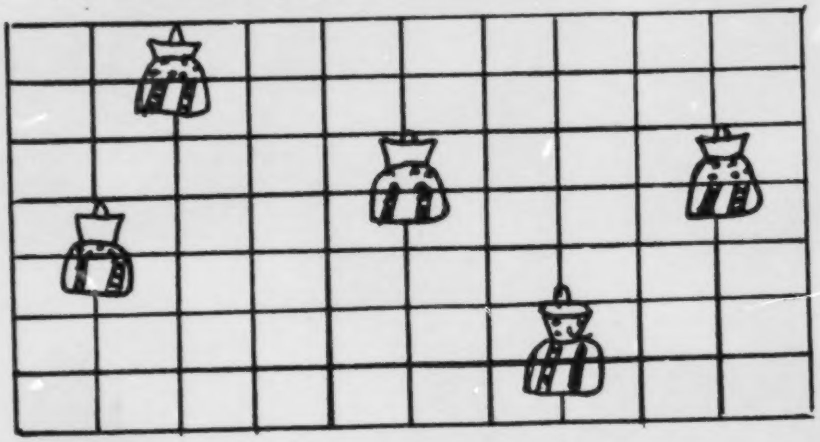
*To adapt for metric--have your students give the rectangles length in metric units rather than inches.



TREASURE HUNT

Materials: 24" x 24" sheet of tagboard
small sheets of construction paper
1 - deck of 2" x 3" pieces of tagboard

Procedure: Construct a game board on the 24" x 24" sheet of tagboard as shown in the illustration below. Divide the board into one inch squares. Cut out small treasure chests and place randomly on the game board. Mark directions on the 2" x 3" cards such as "move one inch right and two inches up."



Instructions:

1. The children may place their markers on any intersection as long as it does not contain a treasure chest.
2. Each child draws a direction card from the deck and moves their marker, following the directions on the card.
3. The first child to land on a treasure chest is the winner.

* Use for metric by using the word "units" rather than inches.

* Variation: A cube marked with 1", 2", 3", 4", ☀ , and ☠.

The marker is moved that many inches on if a sun is rolled - a Weather Card is picked (Smooth sailing-move ahead 2 inches, etc.) If a crossbones is rolled a Bone Pile card is chosen (Storm-move back 1 inch, etc.)

Money

BIG MONEY

Materials:

tagboard or pellon for game board
magic markers
cube, 1 - 6
2 decks of cards
felt play money or pencil and paper

Procedure:

Draw a path on the game board with a magic marker. In each space write playing instructions similar to those you would find on Monopoly, Chance and Community Chest cards. In 3 or 4 spaces place a $ sign. In 3 or 4 more spaces place a ¢ sign. Make 2-2 x 3 decks of cards: one set being the $ deck; the other being the ¢ deck. On these cards write instructions such as "Take another turn," "Lose one turn," "Collect 8 + 6 - 5 + 7 - 12 $ from bank," "Pay each player $1," "Move token to Pay Day," "Move ahead 3 spaces, etc." Make $1 bills, $10 bills, and $100 bills out of felt.

Instructions:

Each player is given $10 to start play. If pencil and paper is used, he writes $10 on his paper. A cube is rolled and the proper number of spaces moved. The player either pays for his money the dollar amount indicated (subtracts from total on paper) or receives dollar amount (adds to total on paper). If using felt money, the player must keep trading ten $1 bills for one $10 bill and ten $10 bills for one $100 bill. This game may have two winners: the first person to stop, or the one with the most money.

EASY MONEY

Materials:

construction paper money - 60 one dollar bills
30 ten dollar bills

2" x 4" - yellow for ones
green for tens

twelve chips - two for each child

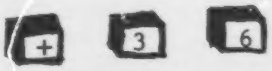
three cubes - one cube + (plus) or - (minus) on all sides

container - to be used for bank

Procedure:

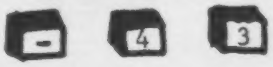
Distribute five (5) ones and one (1) ten and two (2) chips to each child leaving the rest in the bank container. Explain that when the three cubes are tossed, if the cube with pluses and minuses comes up. + (plus) the banker gives them money and - (minus) the child gives the bank money.

Example #1



Bank gives child $9.00. Child already has one ten and five ones plus nine ones. He must now trade in ten of the ones for a ten. (Have child verbalize what happened.)

Example #2



Child cannot give bank seven ones so he must trade his ten for ten ones. Child now has seventeen (17) ones and can give banker seven ones. (Child verbalizes what he has done.)

Play continues for time designated by teacher and winner is the one with the most money and both chips.

NOTE: When a child runs out of money, he may give a chip to the banker and receive a loan from the bank.

Game may be played with 4-6 to reinforce addition and subtraction facts through twelve. (Can also be used with $1, $5, and $10's.)

Concepts: Regrouping an addition and subtraction.

GIVE EACH TOTAL

MATERIALS:	Folder Magnets Coin stamps Iventory index pieces for answer cards 3 cm X 3 cm
DIRECTIONS:	Look at the number of each coin used in each row. Add them up and find the card that matches the correct amount and put it under the word total.
NOTE:	Teacher may provide answer card with totals in a pocket on the back.

$2.63

$3.49

$2.30

Dollar Stamp	Half Dollar Stamp	Quarter Stamp	Nickel Stamp	Dime Stamp	Penney Stamp	Total
2	0	1	1	0	0	
2	1	0	0	1	3	
3	0	0	8	0	9	
4	2	1	0	0	0	

HOW CAN YOU PAY

MATERIALS:
Folder
Coin stamps
Grease pencil

DIRECTIONS:
Look at the money tag. Use a grease pencil and decide how many of each bill and coin you would use to pay for the item. Use as few pieces of money as you can.

	Dollar Stamp	~~Half~~ Dollar Stamp	Quarter Stamp	Nickel Stamp	Dime Stamp	Penney Stamp
$1.20						
$1.27						
$1.60						
$1.35						

HOW MANY CENTS LEFT

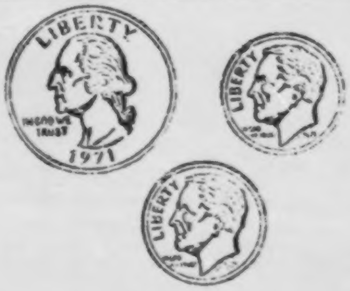
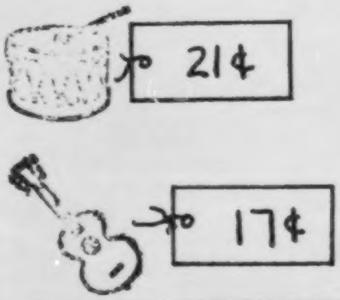
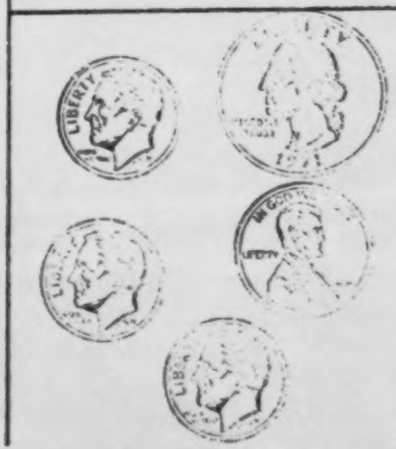
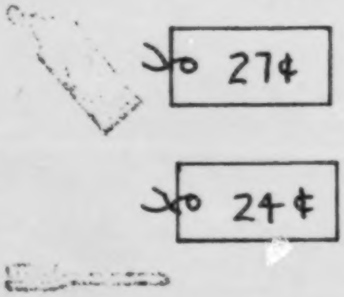
MATERIALS:

Folder
Stamps for objects or cut out from magazines or catalogs
Money stamp
Grease pencil

DIRECTIONS:

Look at the row that tells you how much money you have. Then look at the items you bought. Add up the prices. Then find how much money you had left. Use a grease pencil to write your answer.

Check your answers with the answer key on the back.

Had	Bought	Had Left
	 21¢ 17¢	
	 27¢ 24¢	

MAKE TEN CENTS

Materials:

Make ten cents card deck (see pattern)
Dime chips (see pattern)

Instructions:

2 or 3 players

Put cards face down on table.

Turn four cards face up.

Take turns.

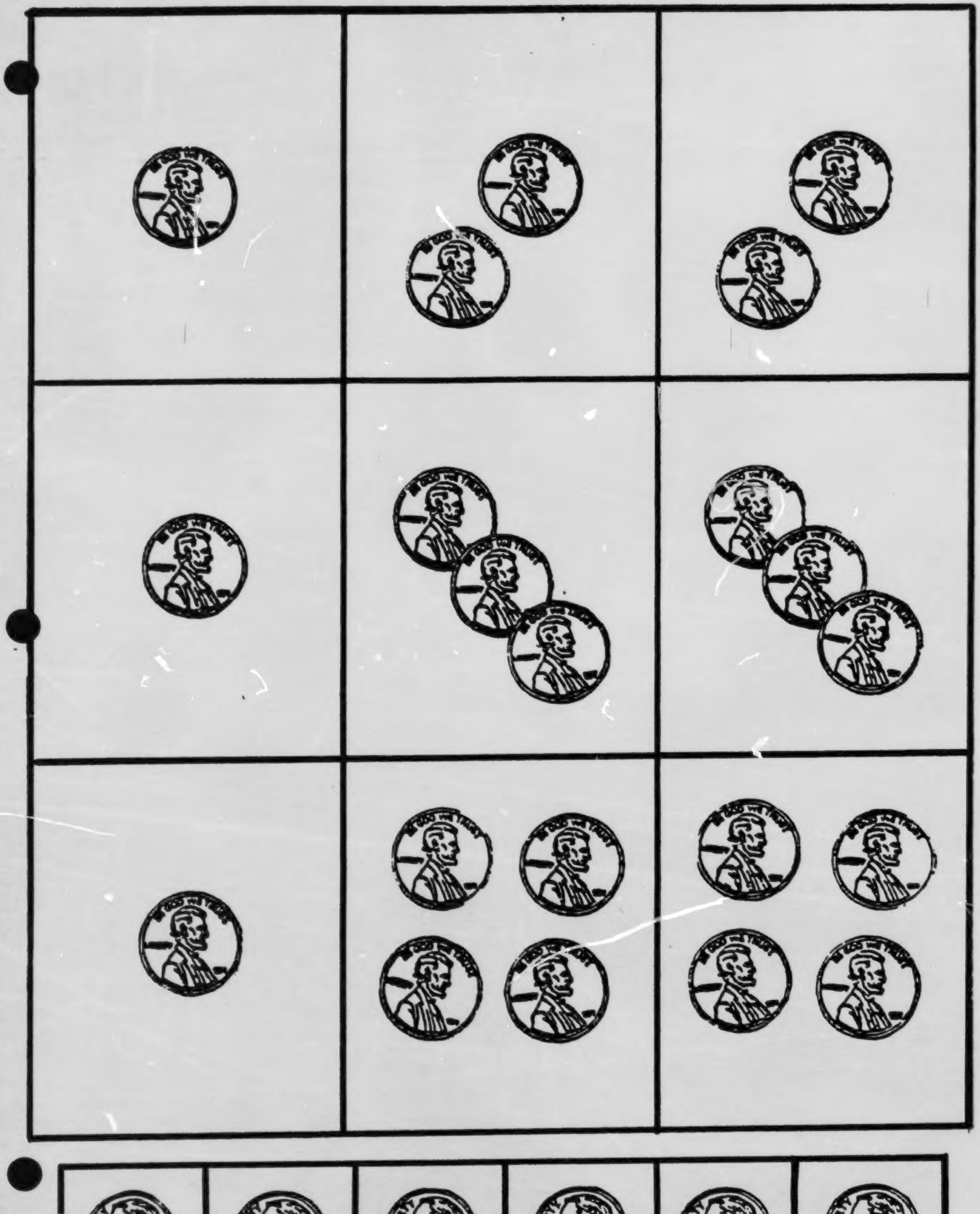
Draw one card and try to use that card and one or more of the cards on the table to make ten cents in all.

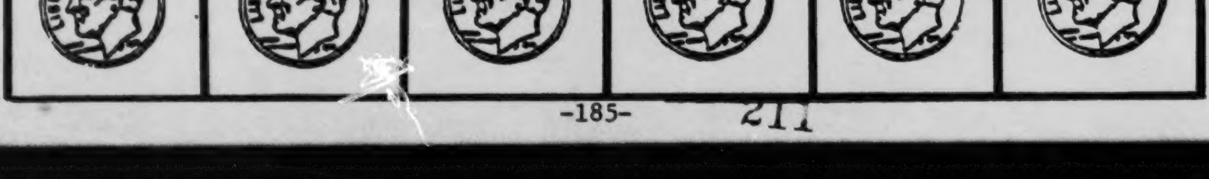
If able to make ten cents, trade the cards for a dime chip.

If unable to make ten cents add the card you drew to those face up on the table.

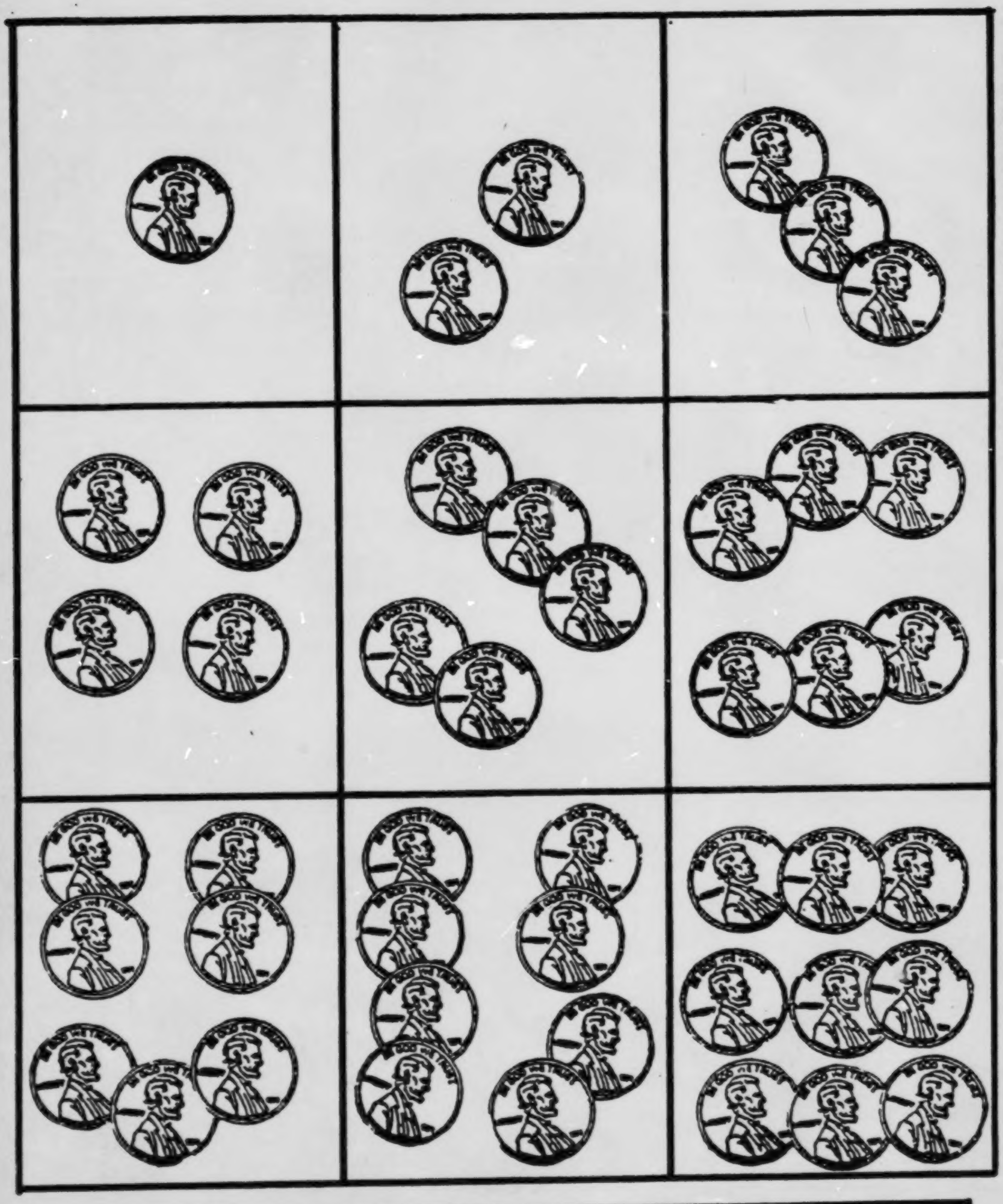
The player with the most dime chips wins game.

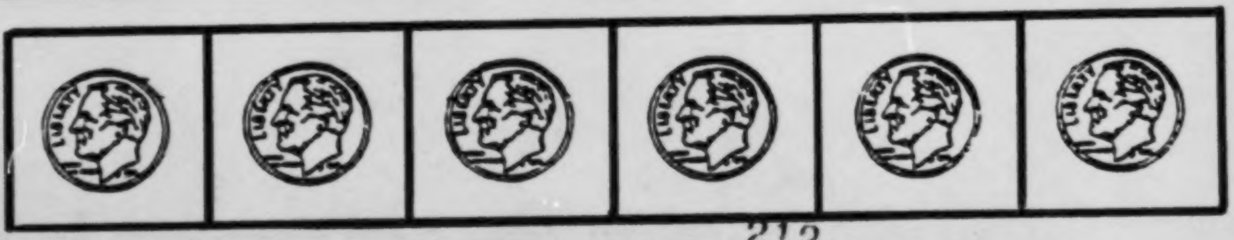
Make Ten Cents





Make Ten Cents





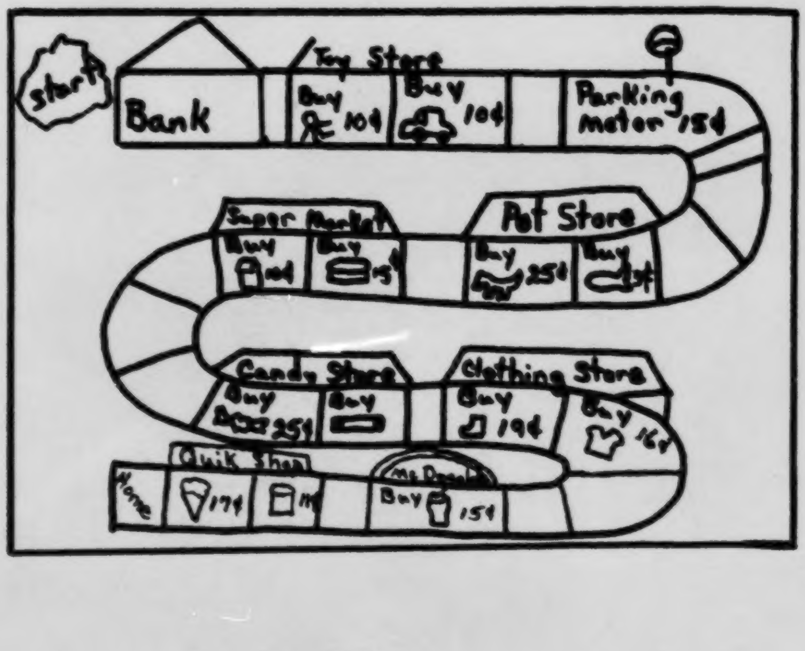
MISER--THE MONEY GAME

Materials: Follow the construction directions for the basic step-a-set game board. Play money, number cube labeled 1-3.

Procedure: Give each child $1.00 in change consisting of two quarters, three dimes, two nickels and ten pennies. Color the price tag on each step on the pathway with either green (for money earned) or red (for money owed). You may decorate the spaces with pictures, also. Try to limit the amount of reading that is required to play the game.

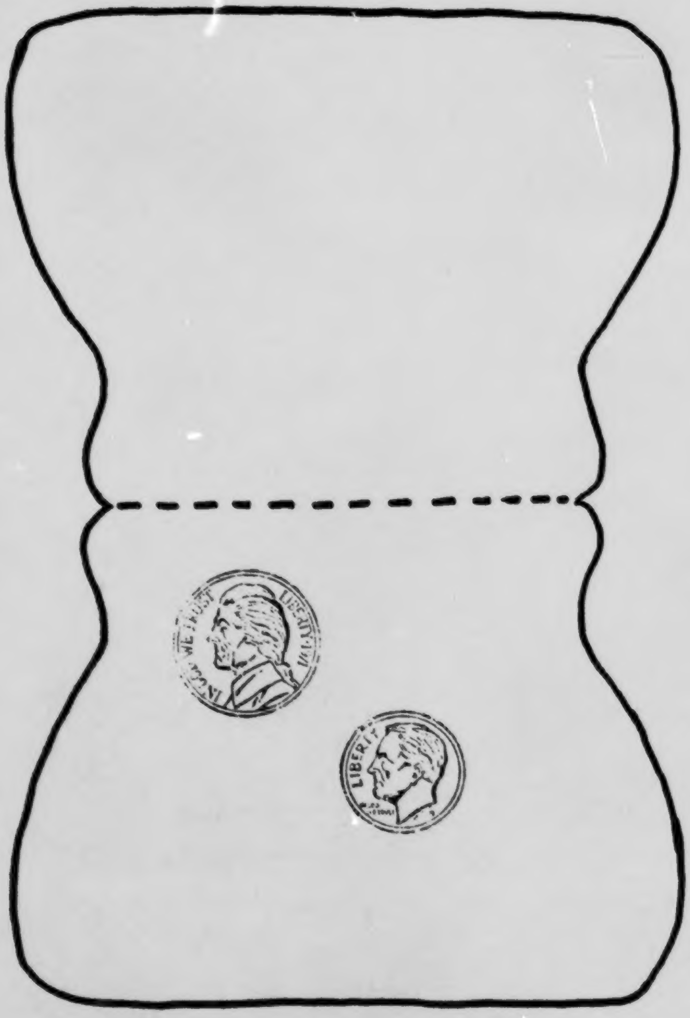
Instructions: Either the teacher of a group leader should be designated as the banker. The banker will pay out money that is earned, collect money that is owed, and will make change when needed.

Roll the number cube and move that number of spaces on the game board. Each student must complete the proper money transaction as stated on the space upon which he has landed. There will be two winners. The first student to reach the finish line and the student who finshes with the most money.


start
Bank
Toy Store
Buy 10¢
Buy 10¢
Parking meter 15¢
Super Market
Buy 10¢
Buy 15¢
Pet Store
Buy 25¢
Buy
Candy Store
Buy 25¢
Buy
Clothing Store
Buy 19¢
Buy 16¢
Quik Shop
Home
17¢
11¢
McDonalds
Buy 15¢

MONEY BAGS

Materials:	Folder Construction paper Coins Glue
Procedure:	Cut money bags from construction paper. Fold over and glue paper coins to the inside of the bags. Glue onto folder and write to the side of them the number of coins and the amount.
Instruction:	Student looks at the bag and reads the amount of coins and total amount. He then tries to guess correctly the kinds of coins it takes to make this amounts.



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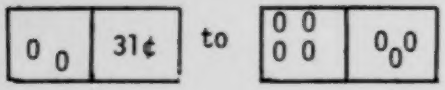
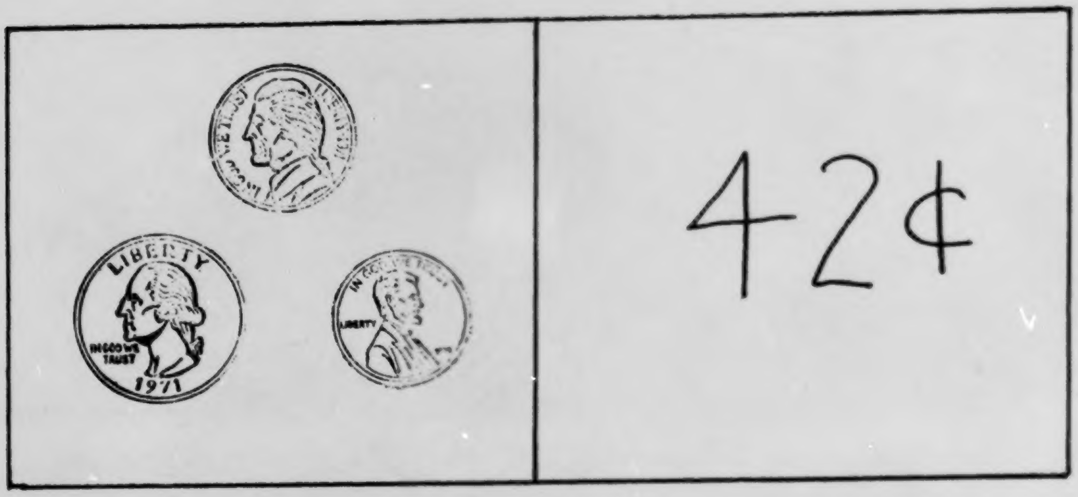
MONEY DOMINOES

MATERIALS: Tagboard for dominoes
Money stamps or printed money

DIRECTIONS: Look at each domino card.
Match each end to another card.

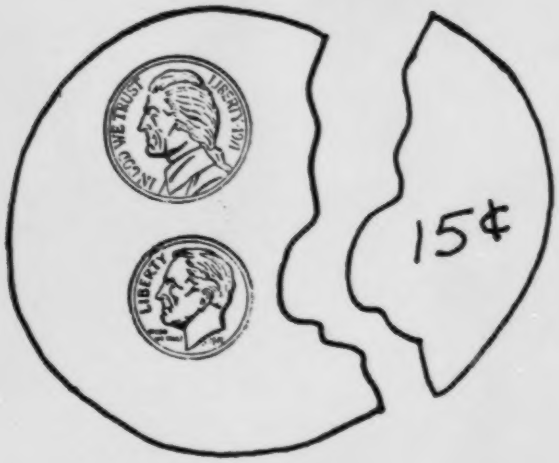
Ex.


0 0
31¢
to
0 0
0 0
0 0 0


LIBERTY
IN GOD WE TRUST
1971
42¢

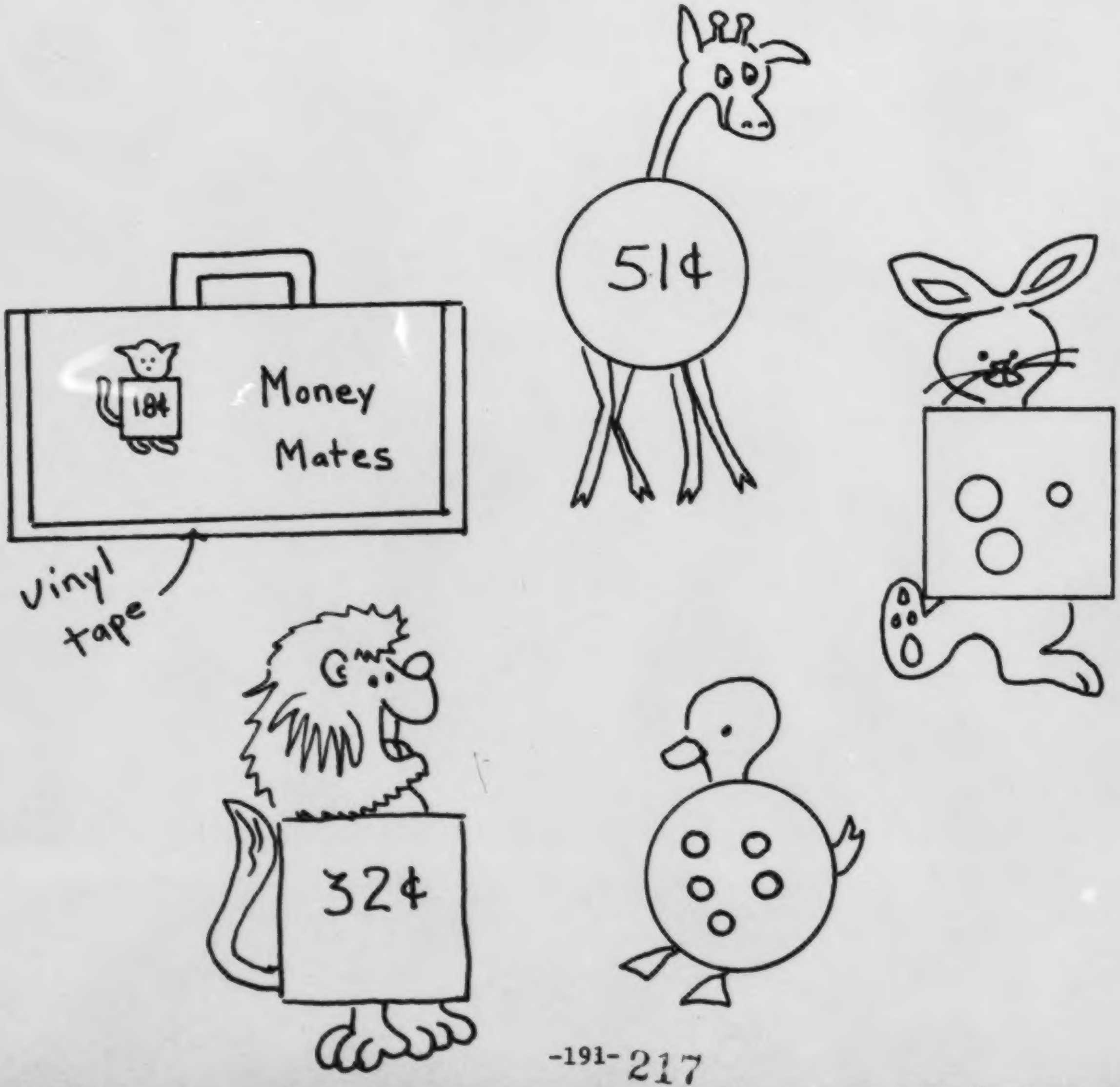
MONEY HUNGRY

MATERIALS:	Direction card with cookie monster 22 cm X 30 cm 12 cookies with a "bite" cut out. Baggie or envelope for storage.
DIRECTIONS:	Look at the coins on the cookies. Find the "bite" that matches the amount of money on each cookie. Put them together.


IN GOD WE TRUST
LIBERTY
LIBERTY
15¢

MONEY MATES

MATERIALS:	Characters Coin stamps Packet for storage (size depends on characters)
DIRECTIONS:	Take out all the money mates match the amount on 1 card with the coins on the other card.
NOTE:	Activity may be self checking by putting the amount on the back of each card stamped with coins.



MONEY O

Materials:

We now have available to us, rubber stamps that look like real money. Stamp pennies on copper colored construction paper, the silver coins on grey construction paper (dime, nickel, quarter and half dollar). After you have completed this, laminate the sheets before you cut out the coins.

Procedure:

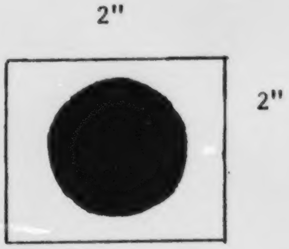
Now cut cardboard squares 6" x 6" enough for six (6) players. See below for example. No two boards will be marked the same.

6"

5¢	50¢	10¢
25¢	1¢	1¢
10¢	50¢	5¢

6"

10¢	1¢	5¢
1¢	25¢	50¢
5¢	5¢	10¢



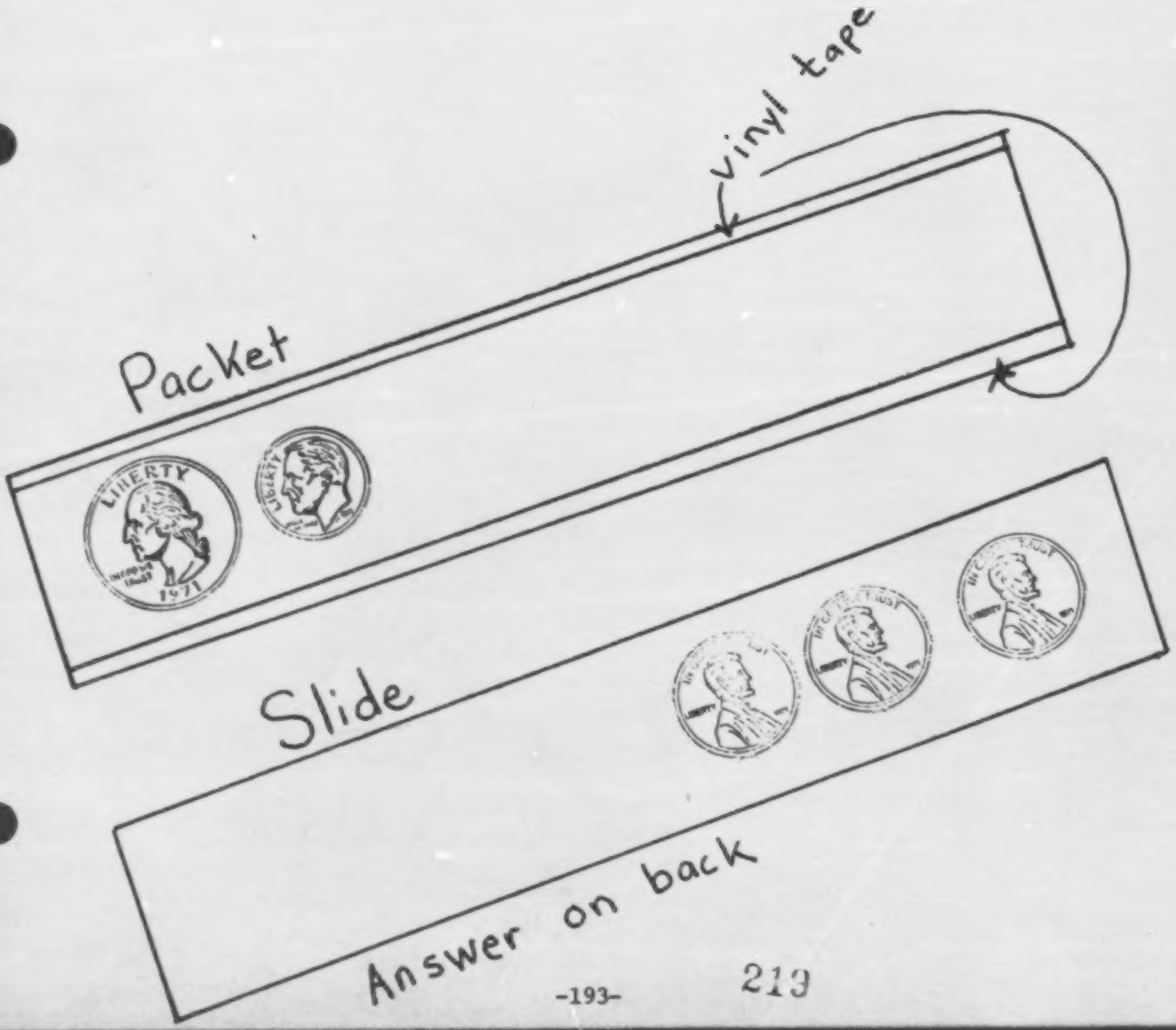
Instructions:

Cut 2" x 2" pieces of cardboard and glue one coin to each, making sure you have one for each square on your 6" x 6" boards. Mix these up in a box and draw out one at a time, holding up the coin for all to see. The first child to hold up his hand, who has a square showing the value of the coin on his card, gets the coin, (e.g., 5¢ matches the nickel, etc.) Three coins in a row, straight across, up and down or diagonally says "Money O." Each time they get a "Money O," give them an extra coin, penny first round, nickel second, etc. Then when the game is over, have children count their coins and state the sum.

While playing this, you can ask how many pennies in a nickel, how many nickels in a dime, etc.

MONEY STRETCHERS

MATERIALS:	Money stretcher slide - size depends on number of coins Money stretcher packet stamped - size depends on the number of coins
DIRECTIONS:	Count the money you see on the packet. Then pull out the slide and count the money on the slide. How much money did you count all together? Check your answer on the back of the slide.


vinyl tape
Packet
LIBERTY
1971
LIBERTY
Slide
Answer on back

SCARECROW SAM

MATERIALS:

- Tagboard
- Magnets
- Money Cards (5cm X 7 cm)
- Money Stamps

DIRECTIONS:

Look at the amount of money on Sam. Find the money cards that match the money on Sam. Turn over the cards to find the message.

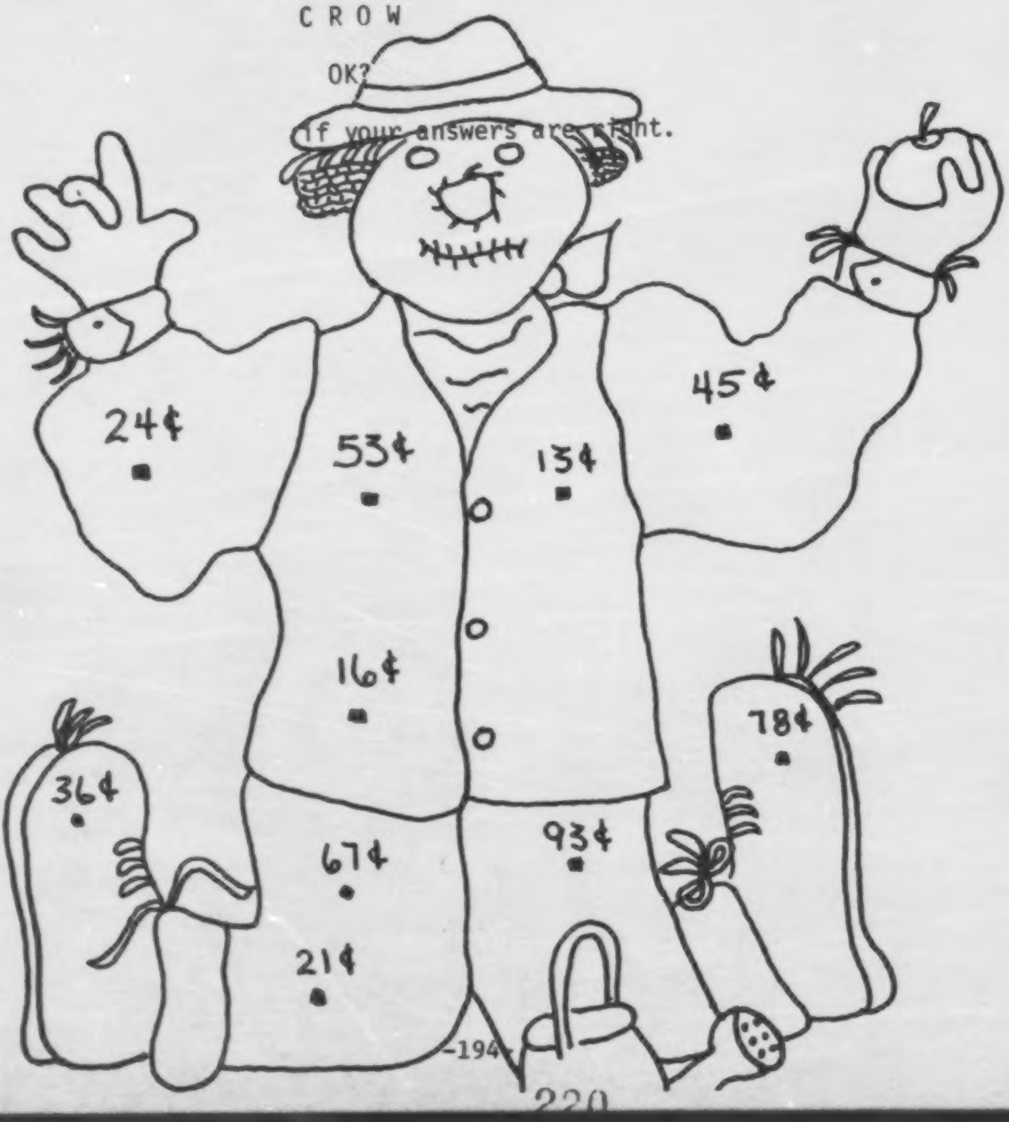
F I N D

A

C R O W

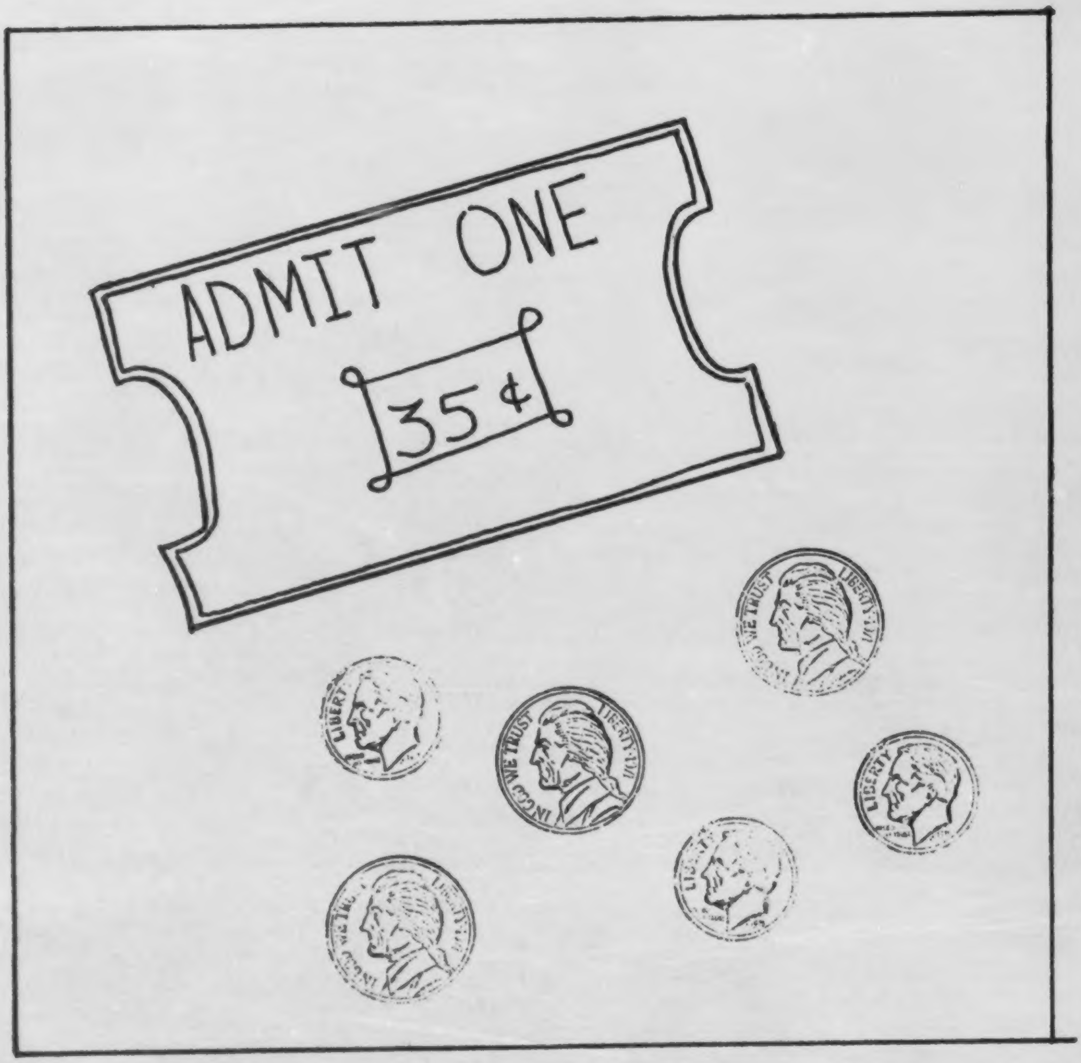
OK?

If your answers are right.



SHOW TIME

MATERIALS:	10 Pieces of tagboard (15 cm X 15 cm Construction paper for "ADMIT ONE" Money stamp or printed money Baggie for storage
DIRECTIONS:	Use a grease pencil or crayon and circle the right coins for the ticket. Check your answer on the back of the card.



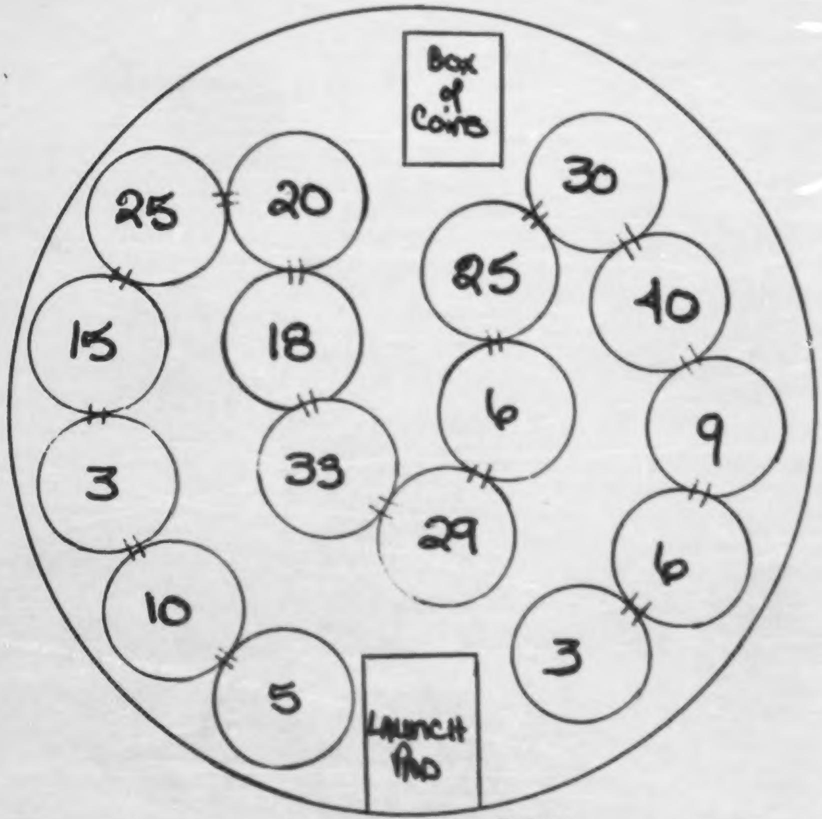
SUN SPACES

Materials: Tagboard circle 20 1/2" (orange)
Small circles 3"
Six Spacemen for markers
One number cube

Procedure: Glue the small circles on the large circle in the form of a path. The small circles should be marked with monetary values.

Instructions: Each child has a spaceman for their marker. Roll the cube to see how many sun spaces they will go. The number on the small circle tells them to take that amount of money from the box. Each child keeps that money and at the end of the game.

For younger children just lay coins on the circles and have them identify each one they land on. Give each child a penny for a correct answer. Have them add up how many pennies they have at the end of the game.



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THE PRICE IS RIGHT

Materials:

6 decks of cards with 10 cards to each deck
Catalogue pictures and prices (under 5 dollars).
Play money in tens, ones, dimes and pennies ONLY.

Procedure:

Attach pictures and prices to each card.

Instructions:

1. Each child is given a deck of cards plus two $10.00 bills. Each pupil is asked to purchase the items and record the change he would receive after each purchase.

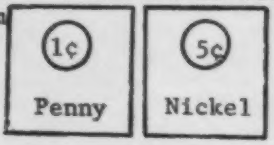
2. One individual is given all 60 cards mixed together. He is asked to make purchases totaling $50.00 ($75.00, $30.00, etc.) He should keep a running total and present the cards and his total at the end of the period.

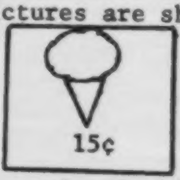
3. Cards may be dealt to the number of players and each pupil totals his cards to see who has "won" the most.

4. Cards may be dealt face down to the number of players and each pupil in succession, turns up his top card and subtracts the price from $50.00 ($75.00, $30.00, etc.) The first pupil to spend within $1.00 of the set amount, wins. Anyone spending more than $50.00, etc. is IN DEBT and out of the game.

***Variation:**

HOW MUCH? Use show-me boards, deck of cards with money on them etc. Pictures are shown with price.





The child matches price with proper coins in his "show-me board."

***Variation:**

I BOUGHT! Addition series done orally. First pupil states "I bought (a ball for 25¢)." Second states "I bought (a bag of candy for 10¢), sum is 35¢." Third states "I bought (a cone for 15¢), sum is 50¢." Play continues until a pupil misses the correct sum. Either he drops out or entire group starts over.

"ZE OLE" CANDY JAR

MATERIALS:

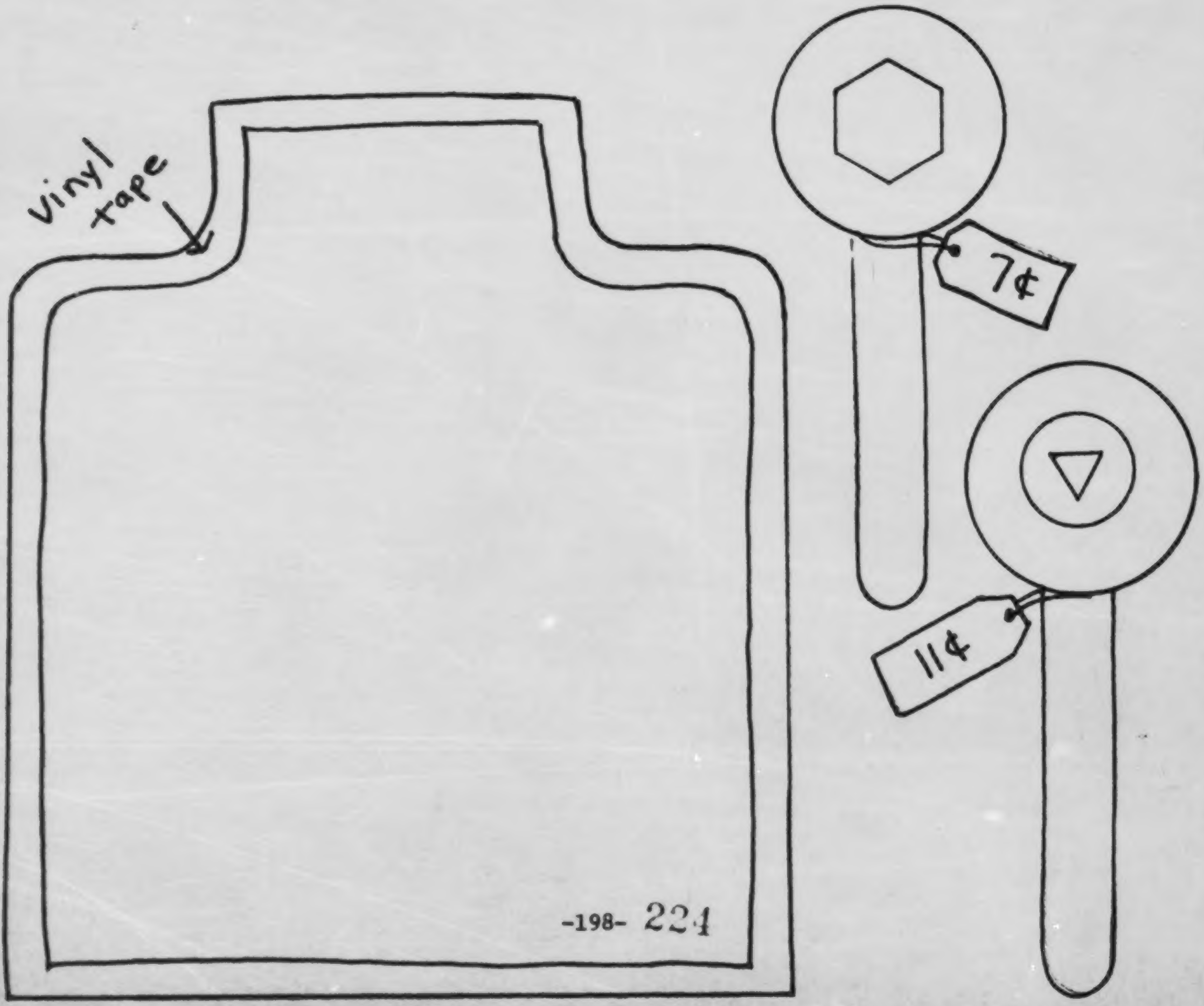
Popsicle sticks
Tagboard circles for lollipops (6 cm diameter)
Red tags and strings
Tagboard for candy jar (20 cm X 20 cm)

DIRECTIONS:

Pull out 2 lollipops. Add the amounts.
Record your problem and answer on paper.

NOTE:

Activity may be self checking if all lollipops are lettered . Child pulls out A & B and checks an answer card for A & B.



Time

DOUBLE TIME

Materials:

tagboard size 55 cm. x 71 cm.
six sets of two of the same kind of wrapping paper characters
two brads, one baggie
four markers, one number cube
60 tagboard clocks with various times showing time before the hour

Procedure:

Paste the wrapping paper characters of the same kind opposite each other. Draw lines to connect them.

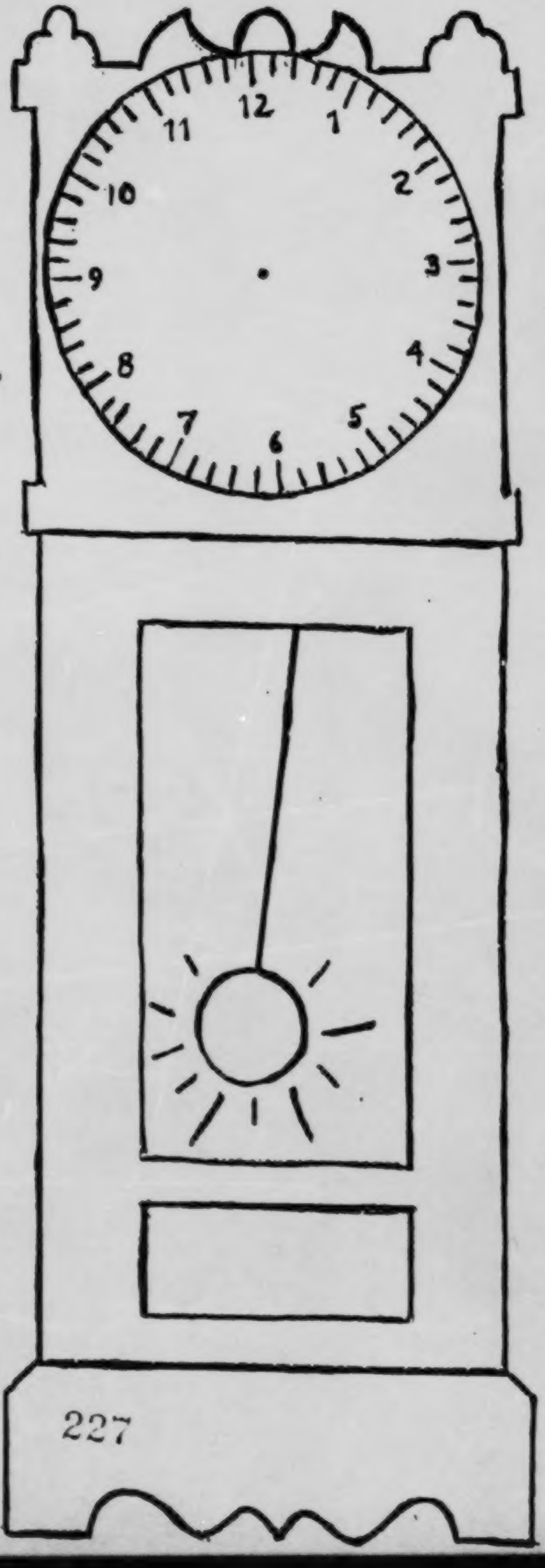
Instructions:

This game is for 2 to 4 players. The objective is to learn that some names have double names. (Example: 1:40 or 20 til 2, 12:52 or 8 til 1)

Each player puts his marker on a different figure.
Take turns and roll the number cube.
Draw a card and tell the two possible times.
If correct then move the number of spaces indicated on the cube.
If you land on your double you may have an extra turn.
When all the cards are gone, the player with the most cards is the winner.

GRANDFATHER TIME

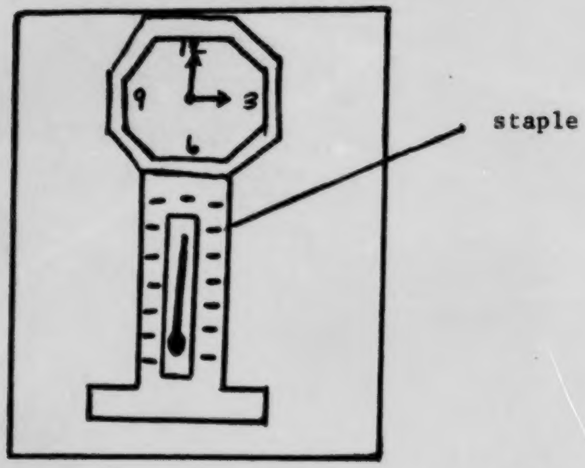
Materials:	Grandfather clocks Plastic hands Brads Magic markers Clock stamp
Procedure:	Color clock and write time at bottom. Stamp a clock on back side and draw hands in to show the correct time.
Instructions:	Give student the clock and have them position hands to show correct time. Turn over to self check.



HICKORY-DICKORY-DOCK

Materials:
12" x 24" piece of tagboard
1 - deck of 4" x 4" tagboard cards
clock face stamp
magnetic rubber strip
1½" x 2" pieces of tagboard

Procedure: Draw a grandfather clock on the large piece of tagboard as shown in the illustration below. Put staples in the clock as shown in the illustration.



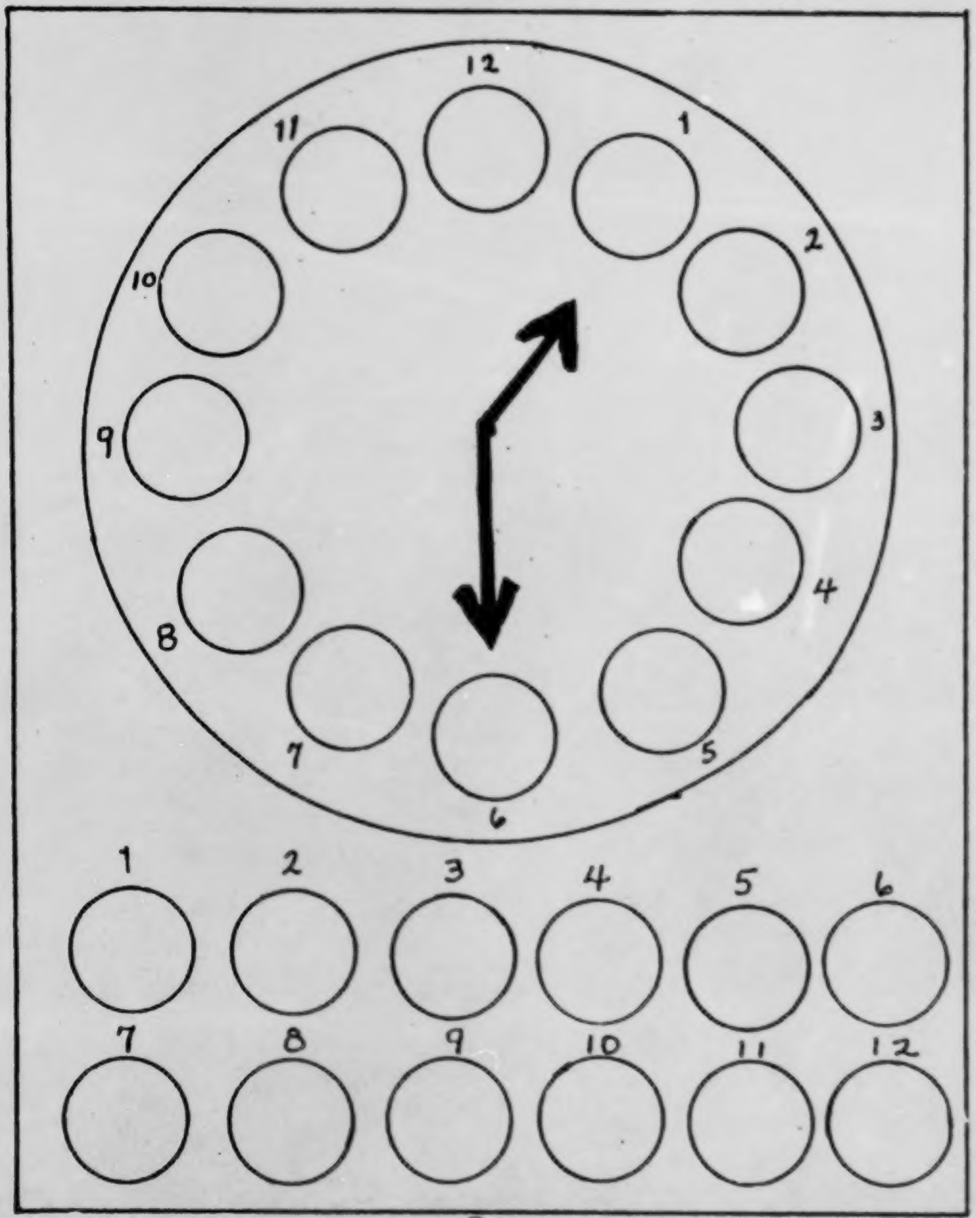
Stamp clock faces on the 4" x 4" pieces of tagboard. Draw a mouse on the small pieces of tagboard and glue a small piece of rubber strip magnet on the back of the card. Draw hands on the cards having clock faces to represent different times.

INSTRUCTIONS FOR HICKORY-DICKORY-DOCK

1. Each child is shown a card with a time on it.
2. If the child can tell the correct time, he moves his mouse character up the clock one space.
3. If the child gives an incorrect time, he is not allowed to move.
4. The first child to move his mouse up the clock and back down the clock is the winner.

NUMBERLINE CLOCK

Materials:	White railroad board - 20" x 14" 12 quiet counters Plastic clock hands Magnetic strip Black magic marker
Procedure:	Place magnetic strips inside each circle on the clock, inside each circle on the number line, and on the back of each quiet counter. Number the quiet counters from 1 to 12.
Instructions:	Use at the instructor's discretion. This is a useful reinforcement aid for the telling of time.



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TELL MY TIME

Materials:

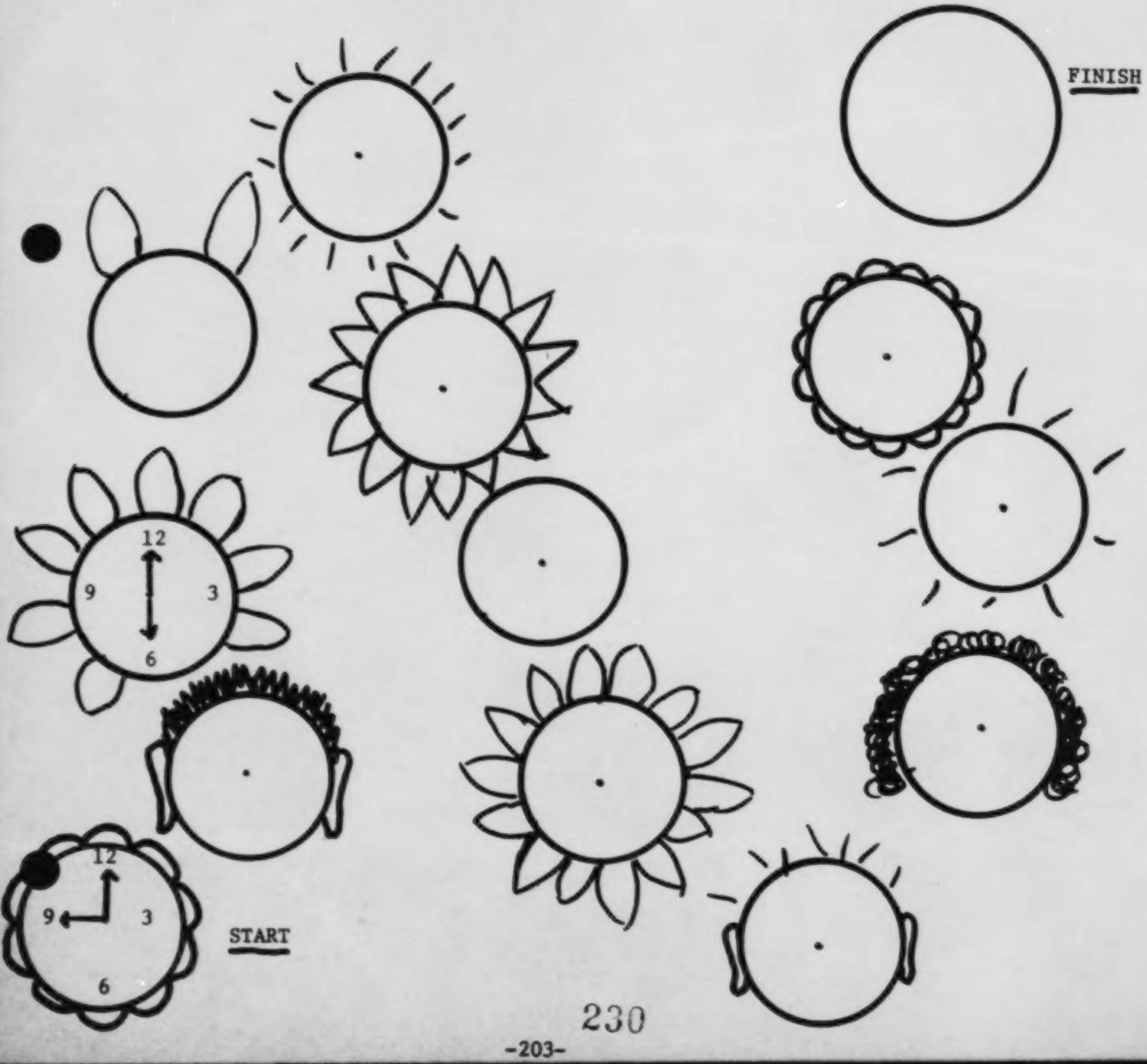
1 - 22" x 28" piece of tagboard
A playing piece for each player
A cube numbered one to five

Procedure:

Make the pathway of clock faces with each face a different time. Starting line could be the time school begins and finish when school is out.

Instructions:

Each child rolls the number cube. He moves the number of steps as shown on the cube. If he can tell the time on the clock face upon which he has landed he may remain there. If the child does not know the correct time, he must return to his previous position. The first child to reach the finish line is the winner.

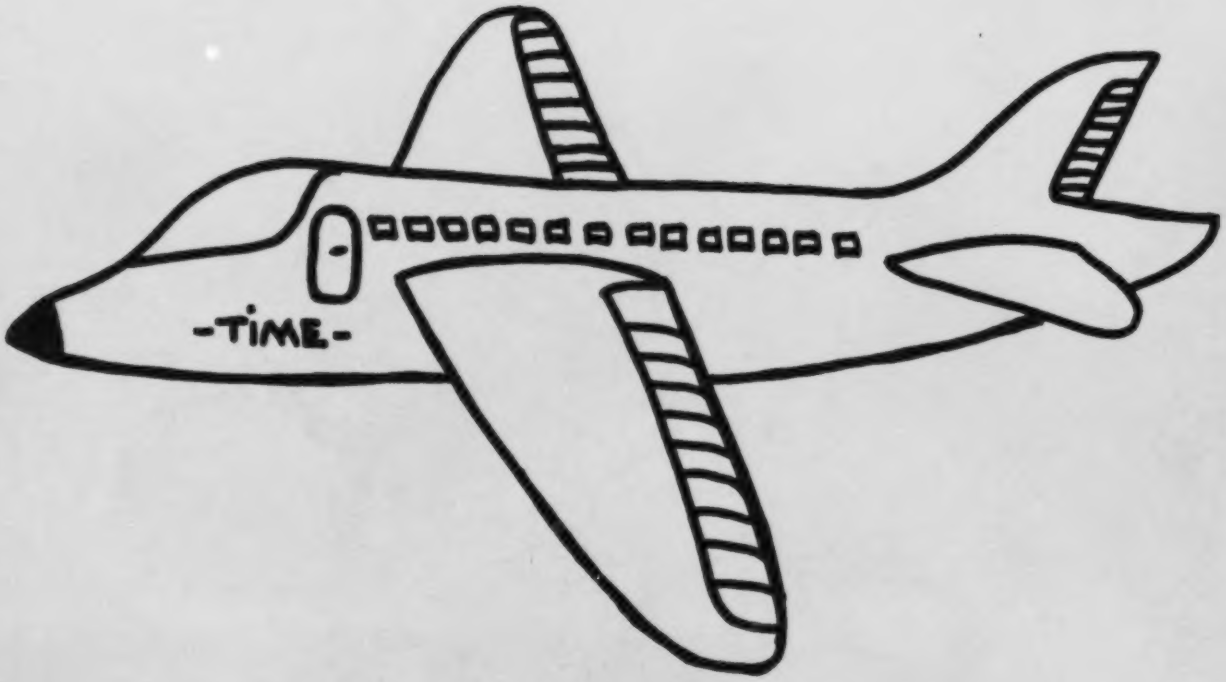


TIME FLIES

Materials: Shoe Box
Construction Paper
Wind Sock (if desired)

Procedure: Paint or cover the shoe box to make a hangar. Cut a large door in one side of the box. Cut out airplane shapes from the construction paper. Stamp or print clock faces on one side of each airplane. Add a wind sock to the box top if desired.

Instructions: Place the airplanes on the table so that their clock faces are not exposed. Each child selects an airplane from the table. If he is able to read the time on the clock correctly he "flies" the plane into the hangar and receives two points. The child must return his plane to the table if he is unable to read the time correctly. The winner of the game is the child having the most points at the end of the contest.



Lab

BEANBAG THROW

Materials:
sheet of cardboard- 22" x 28"

black magic marker

construction paper cut 1 1/2" x 2"

Procedure: Measure the cardboard into squares and mark with magic marker. Then fill in the blank squares with answers. Put your number problems on the construction paper so that each child has a number problem for each answer. This gives each child a deck of his own problem cards.

Instructions:

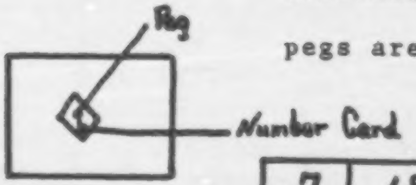
1. Played with a small group.
2. Each player has a deck of cards with problems on them, (add, subtract or multiply).
3. One player tosses the bean bag, then all players try to find a correct number problem for the answer on which the bean bag has landed. The first to find a correct number problem, gets a point.
4. Object of the game is to see who can get the most points.
5. Each player has to close his eyes while tossing the bean bag. Instructor then turns the answer pad around so the tosser will not know where the bean bag has landed.
6. The answer pad is laid on the floor.

* Marble Toss- Substitute marbles for bean bags
Substitute 10 boxes of uniform size (1/2 gal. milk cartons stapled together)

boxes are numbered with number cards attached by paper clips

*Ring- O- Substitute fruit jar rings for bean-bags
Substitute cardboard with a large pegboard

pegs are numbered with number cards



7	18	3	17	15	2
10	4	20	13	16	8
12	5	14	16	21	10
9	11	6	22	23	15

$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$

BEANBAG TOSS GAME

Materials:

36" x 45" piece of cardboard
five small boxes
knife
tempera paint
masking tape

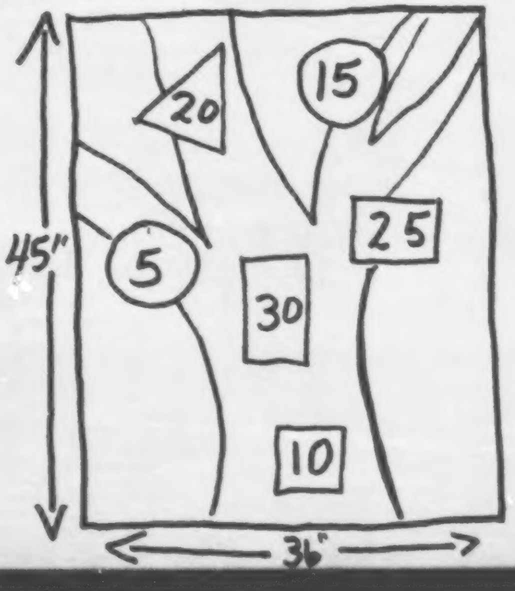
Procedure:

A tree is drawn and painted on the cardboard. Geometric shapes are cut in the cardboard (as shown in the illustration). To give the holes depth, one of the small boxes should be taped behind each opening. Different numerals can be taped to the bottoms of these boxes. Four to six beanbags are made.

Instructions:

1. This game works best when two through four players at a time compete.
2. A line is drawn, or a piece of tape is placed, six feet from the "Beanbag Toss" board. The child must stand behind this line when tossing the beanbag.
3. The child should try to toss the beanbag into one of the openings of the board.
4. The results of the toss into an opening may be used in one of the following ways:

    a. The child identifies the shape of the opening.
    b. The child identifies the numeral and counts over this many beads on a counter frame. The child that has the most beads at the end of the contest is the winner. If the numerals are multiples of five, the child must count the beads by fives.
    c. The child tosses two beanbags into the openings and gives the sum or difference of the numerals.
    d. The child determines whether the numeral is even or odd.



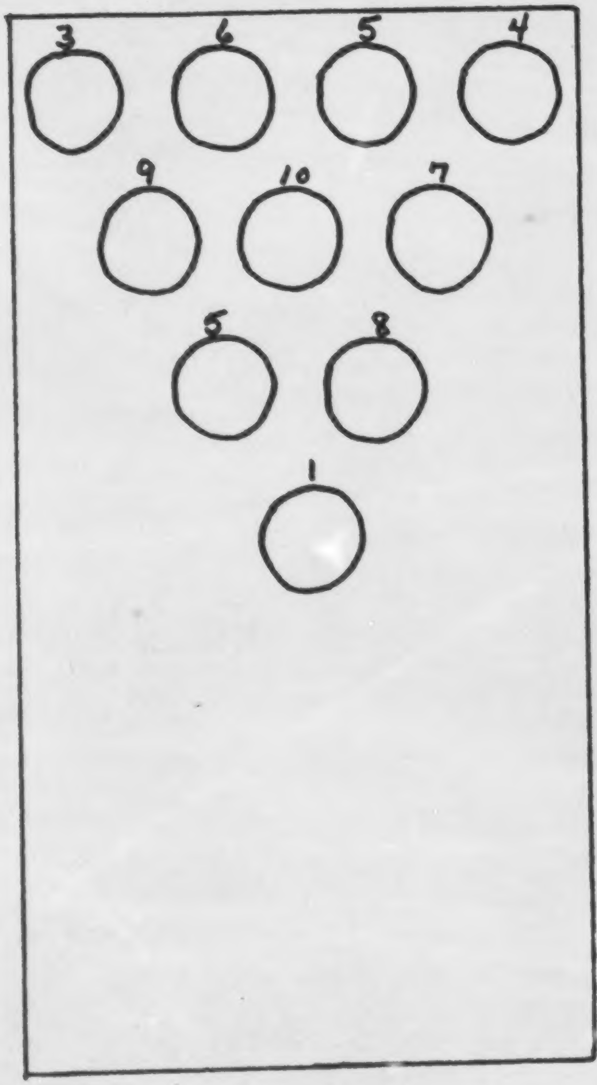
BOWLING GAME

Materials:

1- 20" x 44" piece of cardboard
4- 6" pieces of tubes (3" diameter)
3- 5 1/2" pieces of tubes (3" diameter)
2- 5" pieces of tubes (3" diameter)
1- 4 1/2" piece of tube (3" diameter)

potato chip cans

Procedure: Holes are cut in the cardboard, as shown in the illustration. The holes should be 3" in diameter. The tubes are taped to the holes, to form pockets under the board. The 1/2" difference in the lengths of the tubes will form an inclined plane. The holes are labeled with numerals.



INSTRUCTIONS FOR BOWLING GAME

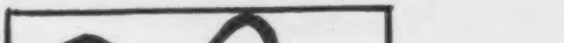
1. Two or four players may bowl.
2. The children stand behind a line seven feet from the game board, when rolling the ball. Tennis balls are used to represent bowling balls.
3. The child rolls the ball up the incline and it drops into one of the ten holes.
4. The child must identify the numeral that is the label of the hole into which his ball has dropped. He keeps track of his score by pushing over the correct number of beads on a counting frame (the amount shown by the numeral)or on a tally sheet.
5. The child with the most points at the end of the contest is the winner.

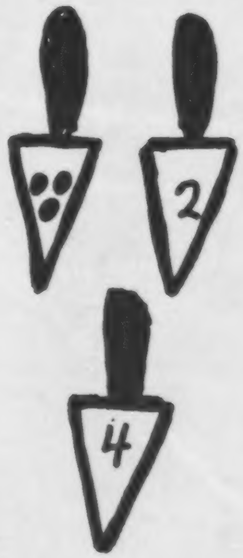
(Note: The child can be allowed to roll two balls. He then gives the sum, difference, or product of the numbers. He must give a correct answer before he can receive any points.)

FEED THE BUNNY

Materials:	1 piece tagboard 35" x 24" 1 piece cardboard 35" x 24" 1 paper cup paint magic markers construction paper
Procedure:	Draw a large figure of a rabbit on the piece of tagboard. Mount it on the stiff cardboard. Paint the board to make it look more appealing. Cut out a circle about 3" in diameter. Insert a paper cup in the hole for his open mouth. On pieces of 3" x 5" construction paper, cut out carrots. With a magic marker, write a numeral or make a set on each carrot.
Instructions:	Give each child a carrot. If he is able to correctly identify the numeral set, he is allowed to feed the carrot to the rabbit. (Note! For older students use number problems on the carrots.)

Variation: dog - bones
monkey - bananas





FISHING DERBY

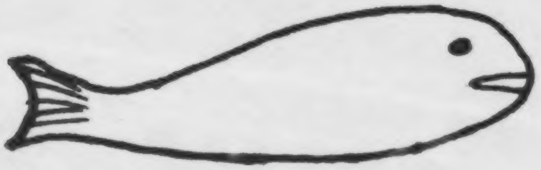
Materials:
1 - 36" piece of dowel rod
box of paper clips
construction paper
36" piece of heavy string
small magnet

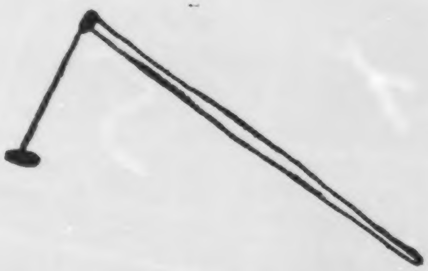
Procedure: Tie the string to one end of the dowel rod to make a fishing pole. Tie or glue the small magnet to the end of the string to serve as the hook for the fishing pole. Cut out several fish shapes from the pieces of construction paper. Place paper clips on the head of the fish to represent their mouths. Mark problems on one side of the fish.

Instructions:

1. Draw a large cirlce on the floor to serve as a pond.
2. Using the pole, with the magnet acting as a hook, the children are required to catch a fish by bringing the magnet into contact with the paper clip.
3. The child must be able to answer the problem on the other side of the fish before he can keep the fish.
4. The object of the game is to see who can catch and keep the most fish.

* You may add variety by adding turtles, starfish, seahorses and an old boot. (These could be harder problems and worth more points). Wrong answers are dead fish and thrown back into the pond.





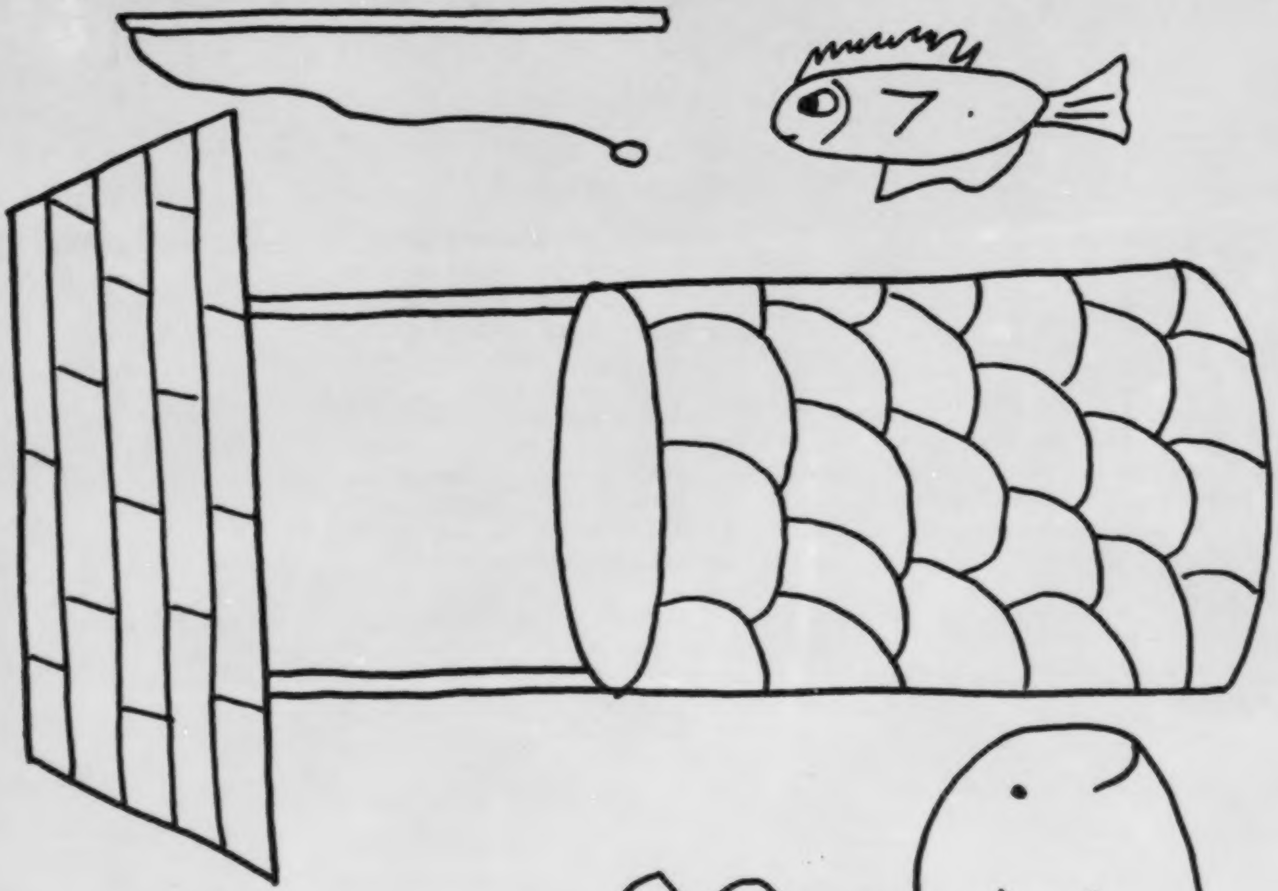
FISHING, WISHING WELL

Materials:

cardboard barrel
cardboard for roof - 13" x 36" (2 pieces)
2 1/2" x 1" board - 36" long (2 pieces)
paint, string and dowel rod (for fishing rod)
cut fish out of construction paper
See the illustration on the next page.

Instructions:

1. Play fishing in a small group. (2-6 children)
2. Use the same instructions as are indicated for the Fishing Derby game.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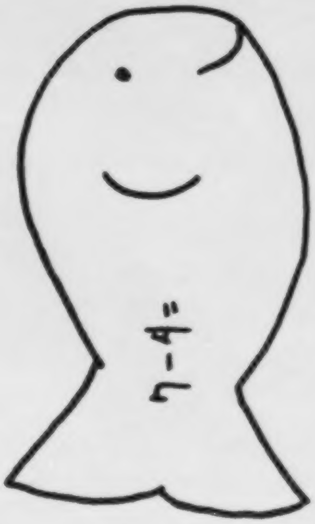
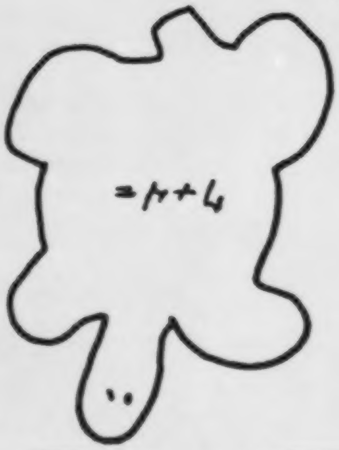

7-4=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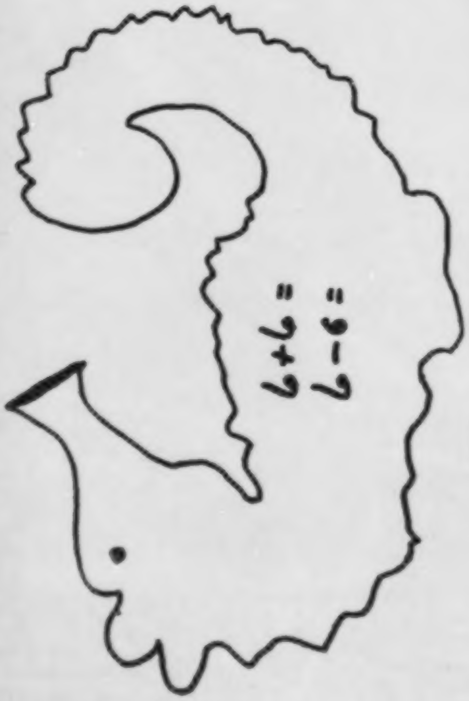
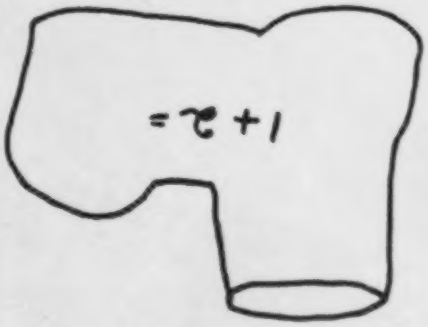
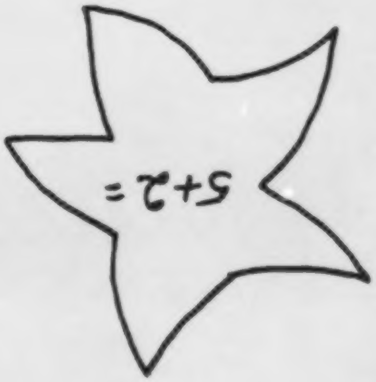

6+6=
6-6=


1+2=

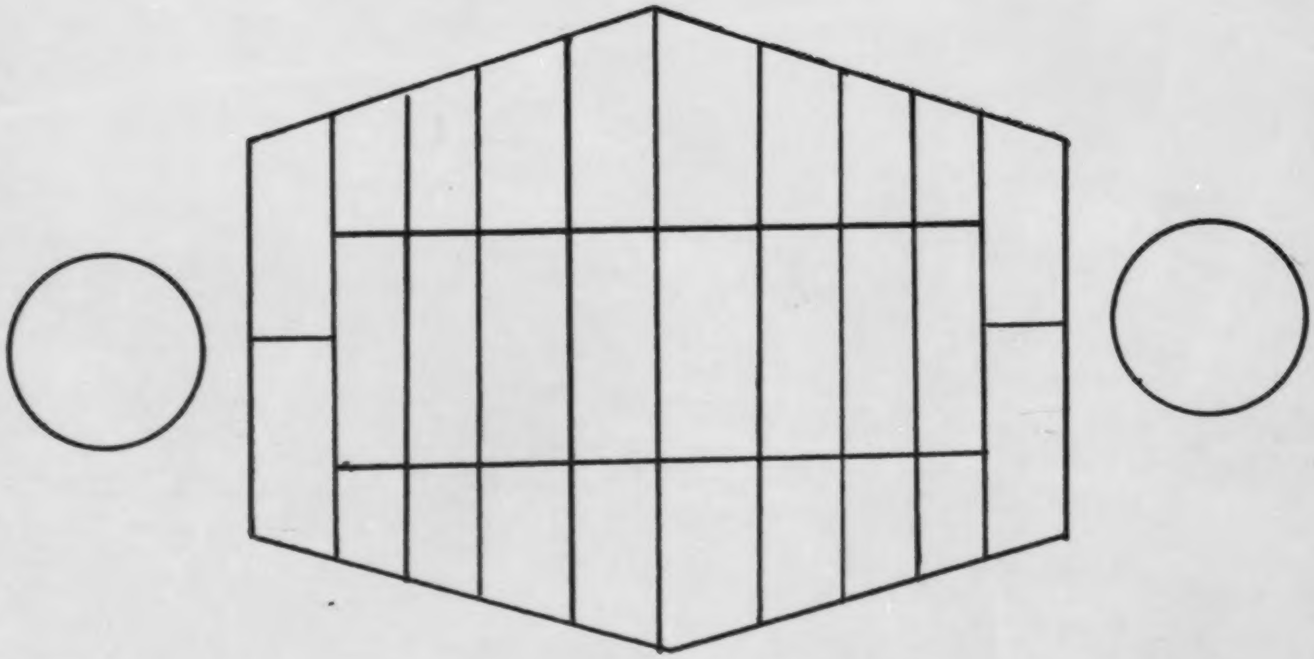

5+2=

FLIP YOUR DISC

Materials:
Small plastic discs
1 22" x 28" piece of poster board or pellon

Procedure:
Construct a game board similar to the one shown in the illustration below.
Mark each space with a problem or use a deck of problem cards.
Make spaces large enough to contain disc.

Directions:
The first player flips a disc from his/her circle toward the opposite court.
If it lands on a line, he gets another turn.
If it lands on a box, the player must respond with the correct answer to the problem.
Play continues until each player has had ten tries.
The person answering the most problems correctly, wins the game.



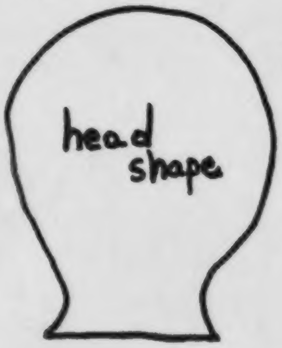
FUNNY FACE

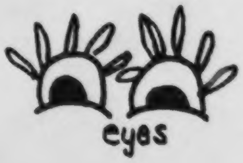
Materials: Construction Paper, Felt-tip Markers, Envelopes with metal clasps and a Package of 3" x 5" cards.

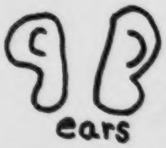
Procedure: Use the construction paper and markers to make several sets of faces with separate parts. The parts might include those illustrated and could be made more durable by laminating. If you wish six children to play, make six "funny face" sets. The parts for each face may be stored in individual envelopes. When ready to play the game, each child is given an envelope containing the parts to complete a face.
Use the 3" x 5" cards to make a deck of problem cards.

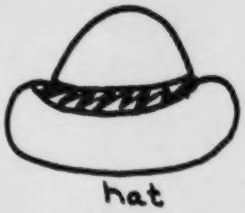
Instructions:
1. Each child is given an envelope containing a "funny face" set.
2. The deck of problem cards is placed down in the center of the playing area.
3. Each child takes a turn at drawing a problem card. If he can give the correct answer to the problem, he may remove a "funny face" piece from his envelope.
4. After each turn, the child returns the problem card to the deck by placing it on the bottom.
5. The object of the game is to see who can put his "funny face" together first.

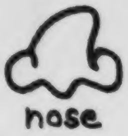
(If the teacher prefers, the "funny face" sets could be made as an Art project. Each child could make his own set.)

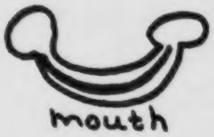


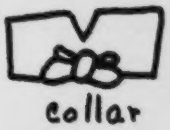












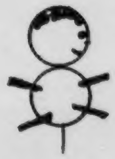
HURDLE RACE GAME

Materials:

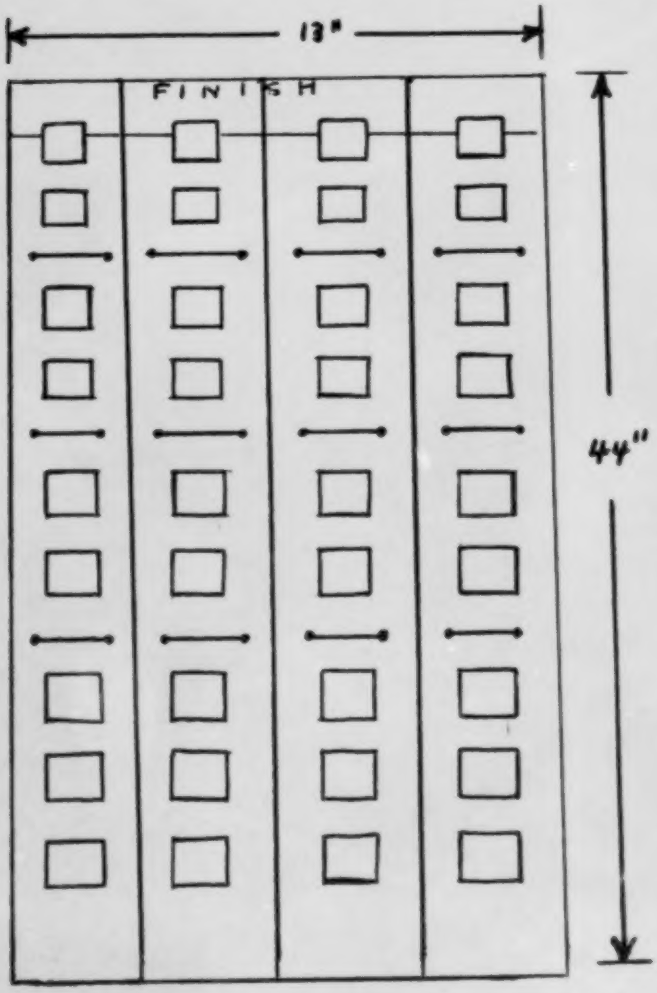
1 - 13" x 44" piece of styrofoam
36 - 2½" x 2½" pieces of styrofoam
24 pegs
12 strips of construction paper

Procedure:

A magic marker is used to divide the styrofoam into four lanes. Nine of the small pieces of styrofoam are glued in each lane (as shown in the illustration). The pegs and strips of construction paper are used to construct hurdles for the board. The hurdles are placed on the board in the positions shown in the illustration. Styrofoam runners are made (as shown in the illustration). Two styrofoam circles, four small pegs, and a pin are used to make the runner.



styrofoam runner



top view

INSTRUCTIONS FOR HURDLE RACE GAME

1. Only two to four players at a time can play the "Hurdle Race" game.
2. The object of the game is to see who can be the first to advance his runner to the finish line.
3. The number of spaces that each child is allowed to advance his runner can be determined in many ways. Some of these ways are given below:
    a. The faces of a cube are marked with sets. The child moves the number of spaces shown by the set on the cube.

    b. The faces of a cube are marked with numbers. The child moves the number of spaces shown by the number on the cube.

    c. Two cubes, marked with numbers, are used. The child moves the number of spaces given by the sum or difference of these numbers. He must give the correct answer before he is allowed to move his runner.

    d. A spinner, showing numerals, can be spun. The child moves the number of spaces shown by the exposed number on the spinner. Two spinners can be used and the player can give either the sum or difference. For second grade, he can give the product. The player moves the same number of spaces as the largest factor.

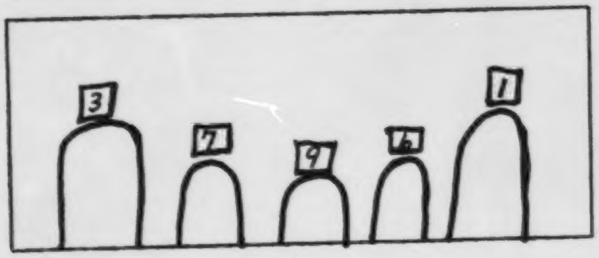
MOUSE HOUSE

Materials:

long narrow cardboard box
tennis ball
piece of rubber strip magnet
small squares of construction paper

Procedure:

Cut archway holes in the side of the cardboard box to serve as mouse holes. Use masking tape on the inside of the box to make these holes have swinging doors. Glue small pieces of magnet above each door. Write numerals, sets or problems on the pieces of construction paper. Place a paper clip on each piece of construction paper. Attach the paper clips to the magnets. This will label each door of the mouse house with a numeral, set or problem.



INSTRUCTIONS FOR MOUSE HOUSE

1. The tennis ball will assume the role of a mouse.
2. The child rolls the ball (mouse) at the mouse house. If he is accurate in his aim, the ball will disappear into one of the mouse holes.
3. Require the child to identify the numeral, set or answer the problem which is the label for the mouse hole.
4. The child that has the most correct identifications is the winner.

NUMBER HOUSE

Materials: Cardboard box with its lid cut off or cardboard 22" x 28"; strips of tagboard or library pockets; masking tape

Procedure: The game board is divided into nine compartments (as shown below). The labels for the rooms are made detachable so they can be changed periodically, to fit the concept being studied.

3	5	8
2	7	1
6	4	9

Instructions: Method A:

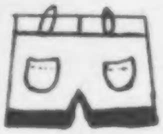
1. The number house rooms are labeled with numerals.
2. A deck of cards, showing sets whose cardinal numbers are the room numbers, is prepared.
3. Each child is given one or more cards.
4. The child gives the cardinal number of the set on his card and places it in the room showing this number.

Method B:

1. The rooms of the number house are labeled with numerals.
2. A deck of cards, showing number problems whose answers are the numbers on the rooms of the number houses, is prepared.
3. Each child is given one or more of these problem cards.
4. Each child comes to the front of the room, holds up his problem card for the class to see, and places it in the room whose number is the answer to the problem.

Variations of Number House Game:

* Variation: MOUSE HOUSE - Mice are used for problem cards

* Variation: BACK POCKET -  Arrange several on game board and play the same as Number House

* Variation: POSTMAN - Letters are used for problem cards. Deliver to proper "house"

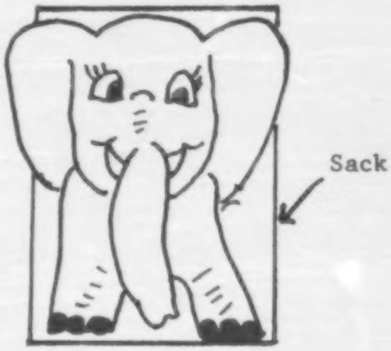
* Variation: MILKMAN - Milk bottles are used as problem cards

PLEASE DO ~~NOT~~ FEED THE ANIMALS

Materials: Small 3 x 5 paper sacks - Construction paper

Procedure: Cut top half of the sacks off and fold in an inch margin. Draw and cut animals that show a front view and have a mouth big enough to slip small pieces of paper through. Paste each animal on the widest side of its sack. Cut the mouth opening through the sack. See example of the elephant below.

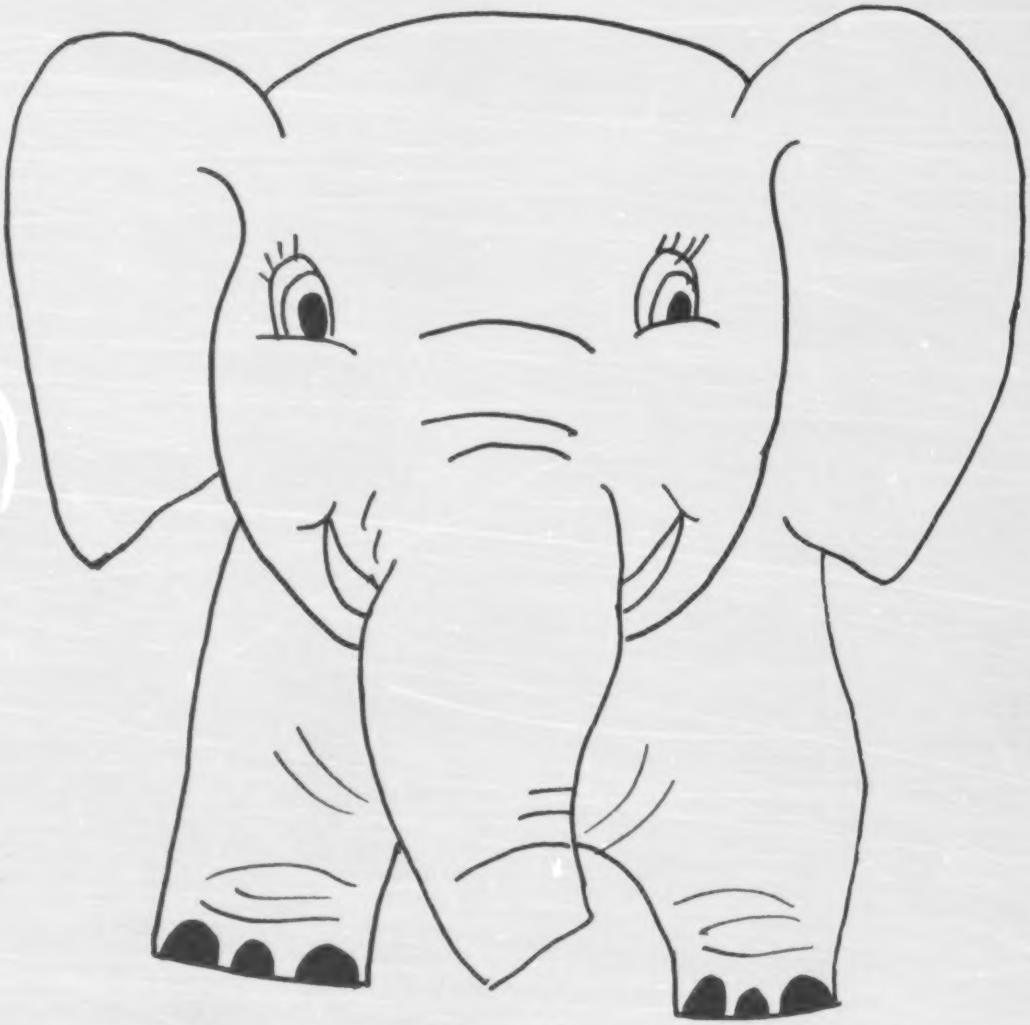
Make many small likenesses of each animal's food small enough to go through the mouth opening--such as peanuts for the elephant.



INSTRUCTIONS FOR

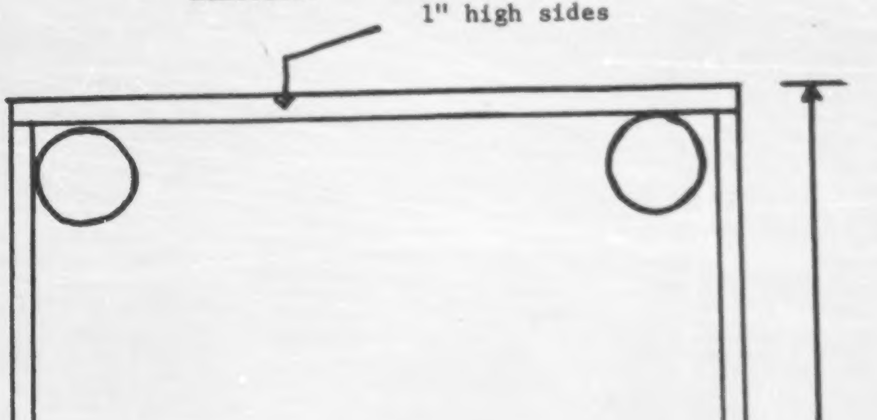
PLEASE DO ~~NOT~~ FEED THE ANIMALS

1. The game can be played by one or two players. One can help and check the other.
2. The idea is simply to feed the animals. The method of play depends on the teacher. Some possibilities could be to:
    a. Have a stack of cards with numerals or sets and the one with the biggest numeral or set feeds the animal that number.
    b. Use a spinner, feeding the number that it stops on.
    c. Use the cubes, adding and then feeding the total.
    d. Draw cards of number facts and feeding the answer.
    e. Count by ones the total amount fed to the animal during the game.



POOL GAME

Material:	1 - 25" x 46" piece of styrofoam (base) 2 - 1" x 46" pieces of styrofoam (sides) 2 - 1" x 25" pieces of styrofoam (ends) 1 - 25" x 46" piece of cardboard (support under the base)
Procedure:	Holes (1½" radius) are cut in the styrofoam to serve as the pockets for the pool game. The illustration shows the positions of the holes. The 1" pieces of styrofoam are glued on to act as cushions for the pool game. The cardboard is glued underneath the styrofoam to help support the base. Different-colored beads are used for pool balls and a dowel rod is used for a pool cue. The pockets are labeled with numerals.



Top view

INSTRUCTIONS FOR POOL GAME

1. Two to four students at a time may play "Pool."
2. The children are to shoot the balls into the pockets.
3. Each different-colored ball is given a value (e.g., red ball is worth three; green ball is worth five; etc.).
4. The kindergarten children will identify the numeral on the pocket and push over enough beads on the counting frame to represent the numeral. The child with the most points at the end of the game is the winner.
5. The first and second grade children will give the sum or difference of the numbers found on the pocket and that determined by the color of the ball (e.g., red ball in the seven pocket becomes 7 + 3 or 7 - 3). The child scores the number of points equal to the answer of his problem, providing he gets it correct.

   (Note: The second graders can also give the product of the numbers.)

SWIM MEET GAME

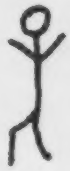
Materials:

1 - 12" x 24" piece of styrofoam
1 cube with the numerals 0-5 on its sides
5 pipe cleaners

Procedure:

Paint the styrofoam blue and mark it off into five lanes with each lane divided into ten sections. Label each section randomly with one of the following numerals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The only exceptions being that the first row must be all 1's and the last row all 10's. (See illustration below). Make five pipe cleaner swimmers as shown below.

1	1	1	1	1
4	3	9	7	6
6	9	3	4	5
7	4	6	2	7
9	7	7	9	3
8	6	5	6	8
3	5	8	3	4
2	9	4	5	9
5	2	2	8	2
10	10	10	10	10



Pipe Cleaner
Swimmer

INSTRUCTIONS FOR SWIM MEET GAME

1. Five or less children can play.
2. The player rolls the cube and subtracts the number on the face of the cube from the first number on the board (10). (e.g. If he throws a 3 then he must answer the problem 10-3= ___.)
3. The player moves his pipe cleaner swimmer from 10 to the answer of the subtraction problem that he has formed. For the above example he would move the swimmer to 7.
4. The next time the player rolls the cube he must subtract the number exposed from the number his swimmer is on. He then moves to the section in his lane, showing the answer to his new subtraction problem. He does this even if it means moving backwards to get to the answer.
5. The first player to get a difference of 1 for his subtraction problem is the winner.

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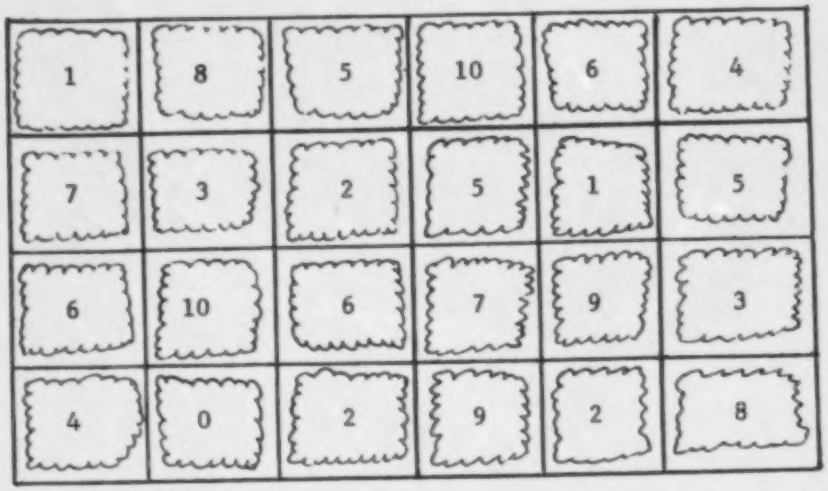
TOSS-A-CUBE

Materials:

2' x 3' piece of cardboard
24 - 6" paper plates
1 - small styrofoam cube

Procedure: Mark the cardboard off into 6" squares. Glue a paper plate on each square. Write the numerals 0 - 10 randomly on the plates (one numeral per plate). See the illustration below.



1	8	5	10	6	4
7	3	2	5	1	5
6	10	6	7	9	3
4	0	2	9	2	8

INSTRUCTIONS FOR TOSS-A-CUBE

1. The child tosses the cube on the board into one of the plates. You may require the child to identify the numeral or you may ask him to tell you the numeral that comes before or after the numeral he has landed on.

2. The cube could be marked with numerals on its faces. The child could then be asked to give the sum, difference or product of the numeral on the cube and the numeral on the plate.

TWIST-O-MATH

Materials: 5' x 5' piece of oil cloth
9 - 4" x 6" pieces of tagboard

Procedure: Mark the oil cloth off into nine equal compartments as shown in the illustration below. Numerals from 1 - 9 are placed on the tagboard cards. These "number cards" are then randomly placed in each grid on the cloth.

$\boxed{1}$	$\boxed{2}$	$\boxed{4}$
$\boxed{3}$	$\boxed{8}$	$\boxed{5}$
$\boxed{9}$	$\boxed{7}$	$\boxed{6}$

INSTRUCTIONS FOR TWIST-O-MATH

1. The child is shown a problem to solve on the grid. (e.g. $2 + 5 = \boxed{}$)
2. The child solves the problem by using his arms, legs, chin or nose to reach out and touch the addends and the sum. The child could solve the above example by perhaps placing a foot on the $\boxed{2}$, another foot on the $\boxed{5}$ and a hand on the $\boxed{7}$.

Universal

BASEBALL GAME

Materials: 22" x 28" piece of cardboard

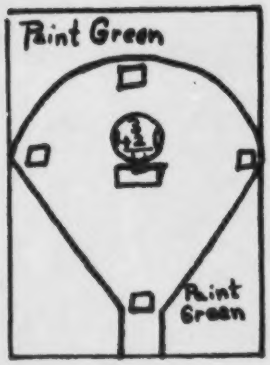
Procedure: A model of a baseball field is drawn on the piece of cardboard (see the illustration below). The squares are glued on the board, to serve as bases and pitcher's mound. The cards that serve as pitchers are in the shape of baseballs, as in the following illustration:

Instructions:

1. The room is divided into two teams.
2. A coin is flipped to see who bats first.
3. A playing piece which represents the men in the field is placed on the pitcher's mound.
4. A playing piece for the team at bat is placed on home plate.
5. One of the baseball-shaped problem cards is placed in the pocket on the pitcher's mound. (This is the pitch to the plate.)
6. The player at bat is allowed ten seconds to answer the problem.
7. If the player gives a correct answer, his playing piece is moved to first base and another one of his teammates moves to home plate. A different baseball-shaped problem card is then placed on the pitcher's mound for the new player to answer.
8. Whenever an incorrect answer is given, or too much time is taken, an out is recorded.
9. When there are three outs, the other team comes to bat.
10. Scores are recorded when runners advance across home plate.
11. The game should be played for a predetermined amount of time or innings.
12. The winner is the team with the most points.

* Game may be played on chalkboard using flash cards.

* Game may be played by pupils moving around "bases" within the classroom.

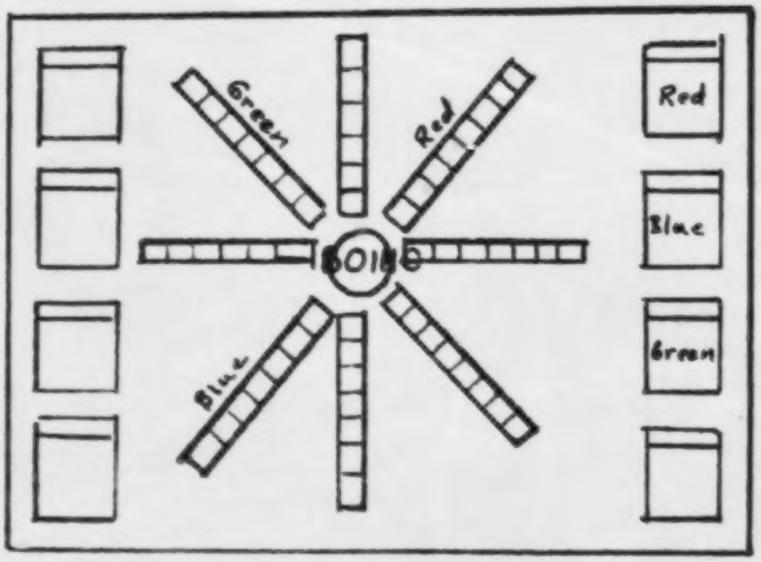


BOING BOING

Materials:
1 22" x 28" poster board
6 or 8 strips of tagboard 2" x 11"
1 3-inch circle out of tagboard
8 library pockets
8 sets of construction paper cards or tagboard
4" x 2" about 12 in each set- 8 different colors

Procedure: Color code 8 pockets, 8 decks of problem cards and 8 tagboard strips, divided into 8 colors. The decks include movement instructions as well as problems.

Instructions: Each pupil in turn draws from the pocket indicated by the first color on his path. He answers the problem and follows the instructions for movement. (i.e. lose one turn, forward 2 spaces, back one space, etc.) The first player to reach BOING is the winner.

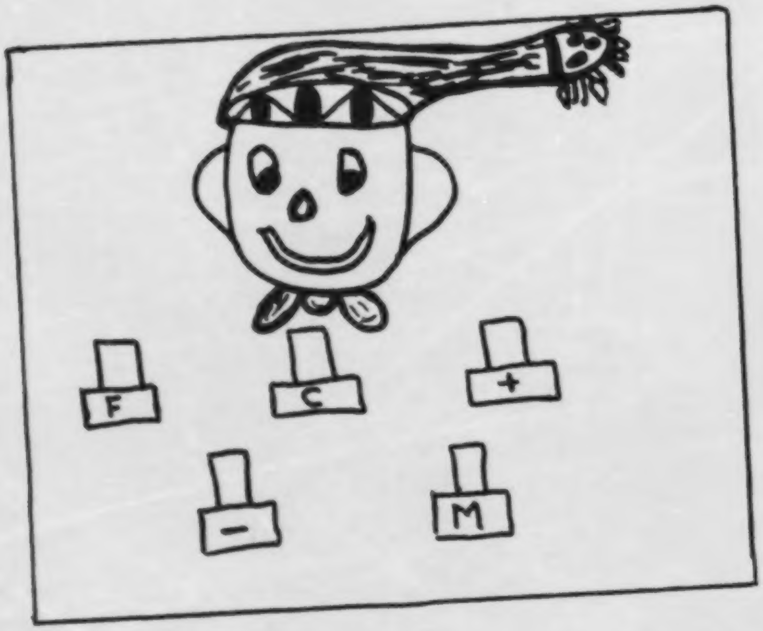


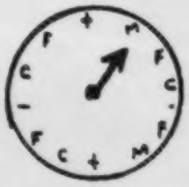
BOZO THE CLOWN

Material:
1 piece of tagboard 14 by 24
colored construction paper for clown
small circle of tagboard for spinner
75 cards 2" by 3" (15 in each set)
5 library pockets

Procedure: Draw a clown's face, make spinner for his nose. Glue five library pockets to hold cards. On the pockets either write +(addition), -(subtraction), m(money). f(fraction), or c for clock. Write the same signs on the outer edge of the nose.

Instructions: Dial the spinner to see what card you should take. On the back of the cards will be a question. If this question is answered right, you keep the card. If you miss the question place the card back in the pocket. See how many cards you have at the end of fifteen minutes.





Spinner
Nose

BUMBLE BEE BOUNCE

Materials:

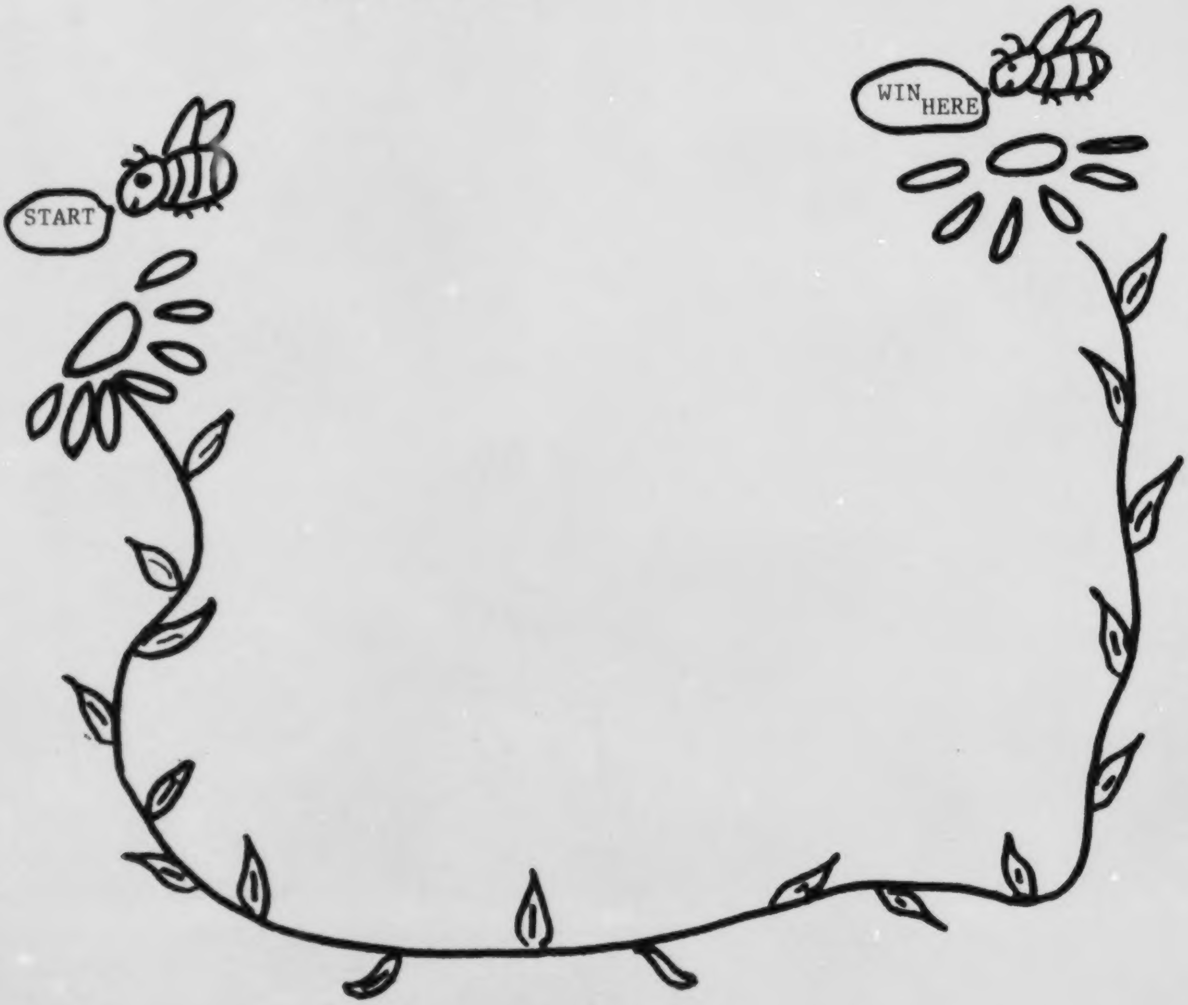
24" x 30" tagboard or pellon
Magic markers
1 - deck of concept cards
A cube (sets or numbers)
Milk lids
Pipe cleaners

Procedure:

Draw a winding path with as many leaves on it as desired. At the start and winning points, make a large flower and a bumble bee. The milk likds may be used for movers. Make three holes on each side of the lid and insert about 1" pipe cleaner for the legs.

Instructions:

This game may be played using different concepts to meet the need. If you prefer cards, each child may draw a card and identify the set of number. If they answer with the correct answer they may roll the number cube and move that number of leaves. The game continues until someone reaches the winning point.



BOZO THE CLOWN

Material: 1 piece of tagboard 14 by 24
colored construction paper for clown
small circle of tagboard for spinner
75 cards 2" by 3" (15 in each set)
5 library pockets

Procedure: Draw a clown's face, make spinner for his nose. Glue five library pockets to hold cards. On the pockets either write +(addition), -(subtraction), m(money). f(fraction), or c for clock. Write the same signs on the outer edge of the nose.

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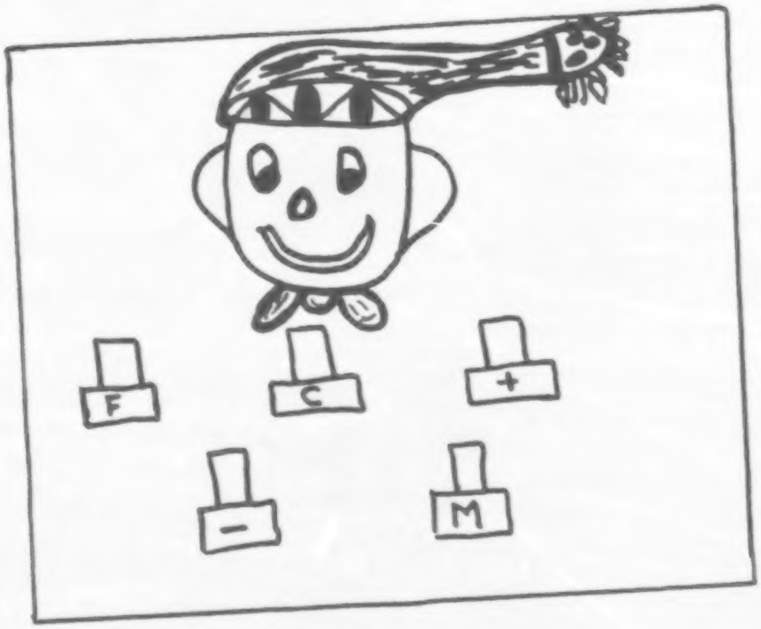
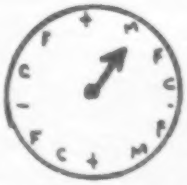




Spinner
Nose

BUMBLE BEE BOUNCE

Materials:

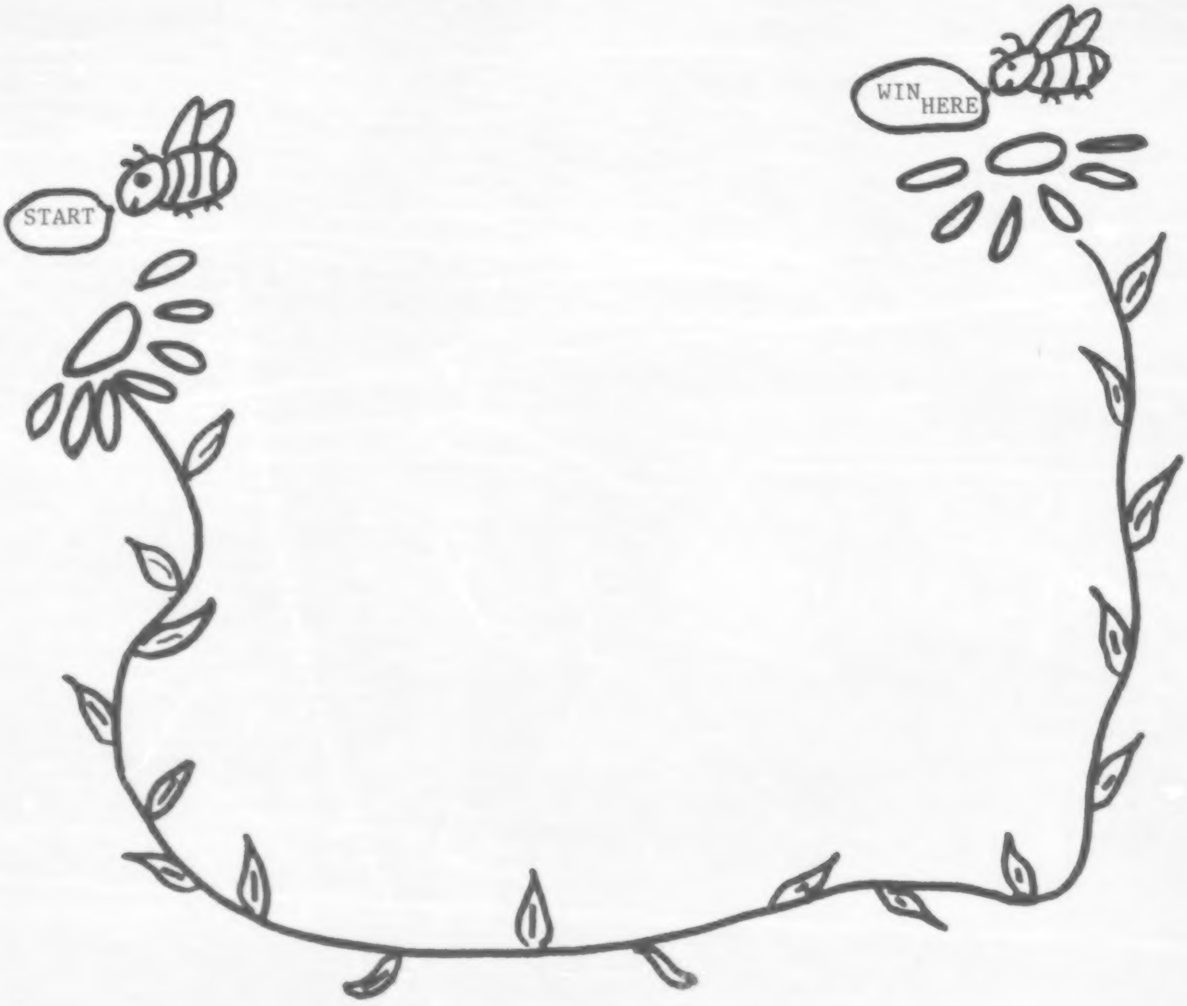
24" x 30" tagboard or pellon
Magic markers
1 - deck of concept cards
A cube (sets or numbers)
Milk lids
Pipe cleaners

Procedure:

Draw a winding path with as many leaves on it as desired. At the start and winning points, make a large flower and a bumble bee. The milk likds may be used for movers. Make three holes on each side of the lid and insert about 1" pipe cleaner for the legs.

Instructions:

This game may be played using different concepts to meet the need. If you prefer cards, each child may draw a card and identify the set of number. If they answer with the correct answer they may roll the number cube and move that number of leaves. The game continues until someone reaches the winning point.



CLIP-O-PIN

Materials:

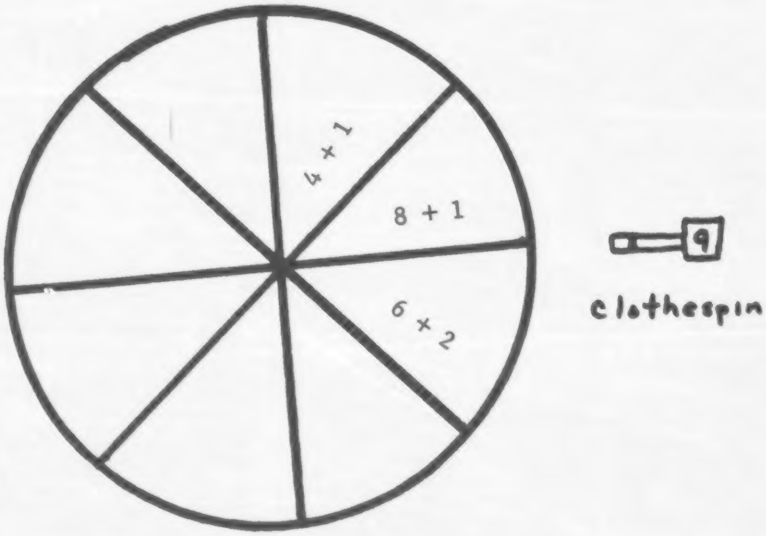
clothespins
pieces of construction paper
paper plates, circles of tagboard on pizza rounds

Procedures:

Rule plates off with a magic marker into pie shaped sections. Write problems in these sections for any given concept. (See illustration below). Write the answers to these problems on pieces of construction paper and glue to clothespins.

Instructions:

When the child discovers the answers on the plate, he clips the appropriate clothespin to the pie section of the plate.



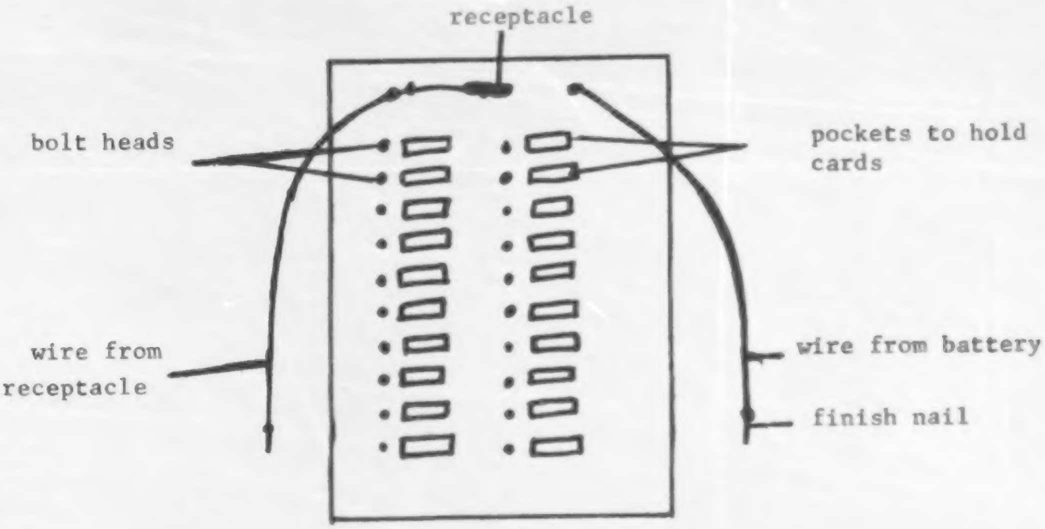
ELECTRIC BOARD

Materials:

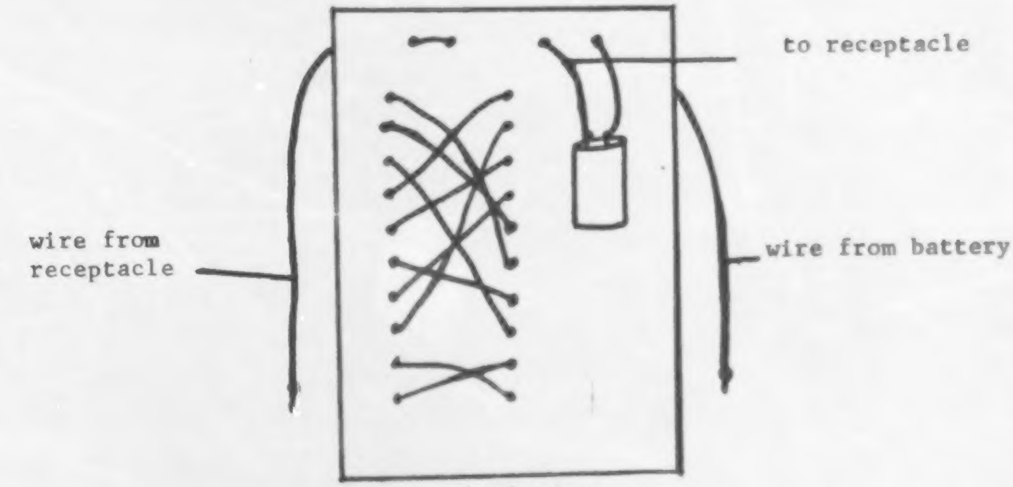
20 - pockets to hold cards
1 - 15" x 25" piece of plywood
20 - 5/16" stove bolts with taps
1 - 1½ volt battery
1 - light bulb for a 1½ volt battery
1 - light bulb receptacle
1 - roll of electrical wire
2 - finish nails

Procedure:

The board is constructed as shown in the following diagrams. The scheme for hooking up the wires is found on the next page of this section.

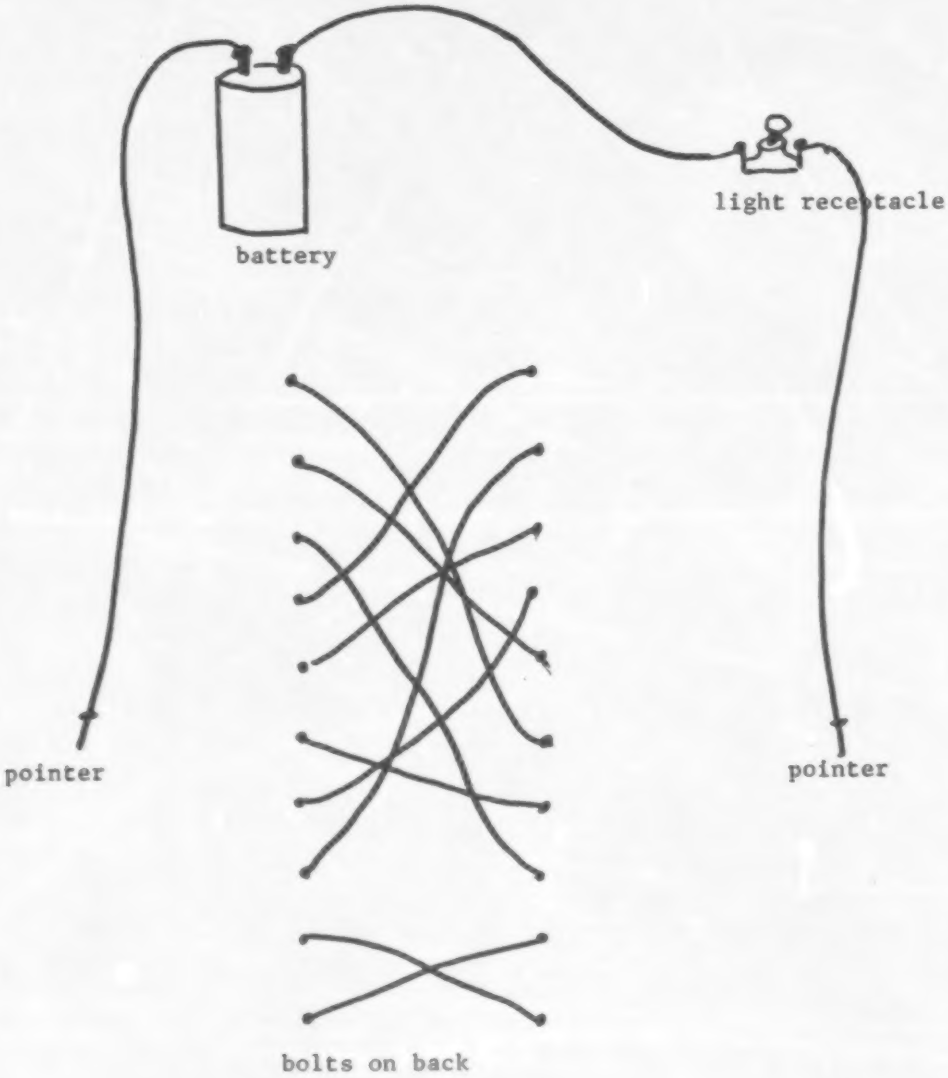

receptacle
bolt heads
pockets to hold cards
wire from receptacle
wire from battery
finish nail

front view


to receptacle
wire from receptacle
wire from battery

back view

Scheme for hooking up wires for the electric board.


battery
light receptacle
pointer
pointer
bolts on back

OPERATING INSTRUCTIONS FOR THE ELECTRIC BOARD

1. A deck of cards that will fit into the pockets of the electric board is prepared.
2. Number problems are written on ten of these cards. The answers to these problems are written on ten more cards.
3. The cards showing the number problems are placed on the left-hand side of the electric board.
4. To determine where to place the answers to these problems (on the right-hand side of the electric board), place one of the pointers on the bolt head of a problem. Then move the other pointer from bolt head to bolt head on the right-hand side of the electric board until the light comes on. Place the answer to the problem in this pocket. The pointer is moved to the next problem and the process is repeated.
5. The child operates the electric board by placing one pointer on a problem and the other pointer on the answer that he has computed. If he is correct, the light will come on. He repeats the above procedure for all the problems.
6. Several different decks of problem and answer cards should be prepared so they can be changed periodically.

EYE GUESS

Materials:	1 - game board 22" x 28" 9 - 4" x 4" pieces of construction paper to serve as covers 9 - library pockets to hold answers 1 - deck of problem cards
Procedure:	Divide the game board into 9 squares. Place one library pocket with an answer card showing in each of the sqaures. Cover each pocket with one of the pieces of construction paper. Mark the center cover Eye Guess. The rest of the covers are lettered A-H. See the illustration below.
Instructions:	Life the covers labeled A-H, exposing all the answers to the class. Do not expose the answer under Eye Guess. Return the covers over the answers. Expose a problem card to the student. The student must give the answer orally and he must indicate the position where it is hidden on the board. The correct answer and location gives that team 2 points. If the student does not think the answer to the problem has been exposed, he can say it is under the Eye Guess cover. If it is 1 point for his team. The team with the most points at the end of the contest is the winner.

9	10	17
12	15	13
16	11	14

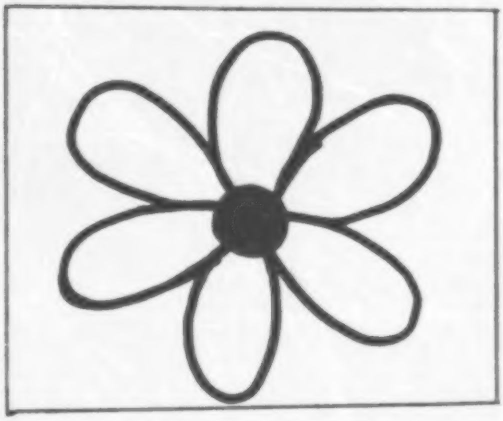
A	B	C
D	Eye Guess	E
F	G	H

FLOWER GAME

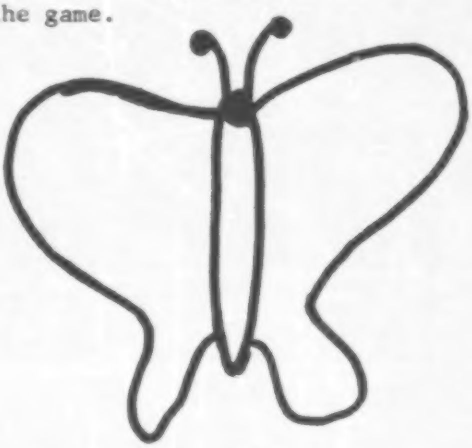
Materials: 4, 5, or 6 pieces of 12" x 12" pieces of styrofoam or cardboard
felt
glue
deck of problem cards

Procedure: Cut out several flowers having the same number of petals from the felt and glue them onto the strofoam or cardboard. Also cut a number of butterflies from a different colored piece of felt.

Instructions:
1. Give each player one of the flowers.
2. Have two children compete against each other at a time. The first one giving the correct answer to a flash card problem gets to put a butterfly on one of his flowers petals.
3. The play is rotated around the table. The first player to cover all the petals and center of their flower with butterflies is the winner of the game.



Flower



Butterfly

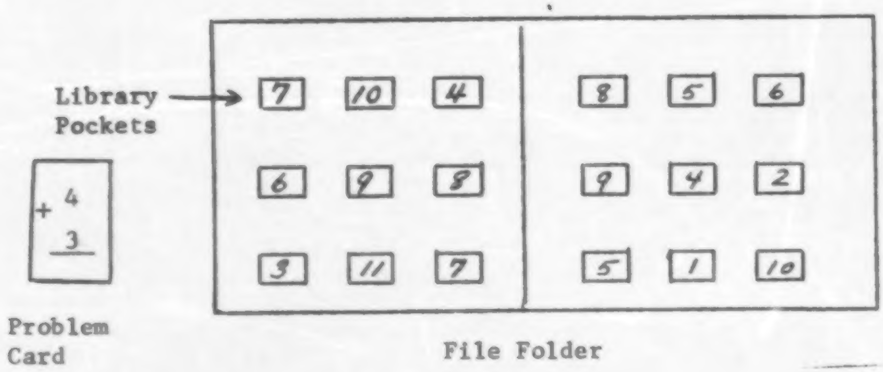
FOLDER MATH

Materials:	file folders library pockets 1 deck 3" x 4" pieces of construction paper.
Procedure:	Glue the library pockets onto the file folders as shown in the illustration below. Color code the library pockets and problem cards.

Instructions:

1. Prepare the same number of problem cards as there are pockets.
2. Write the corresponding answers to the problem cards on the pockets. (See the illustration below.)
3. Give the child a file folder with the deck of corresponding problem cards.
4. The child is required to match the problem cards with their answers by placing the cards in their appropriate pocket.

* Can be adapted as a game called On The Track.

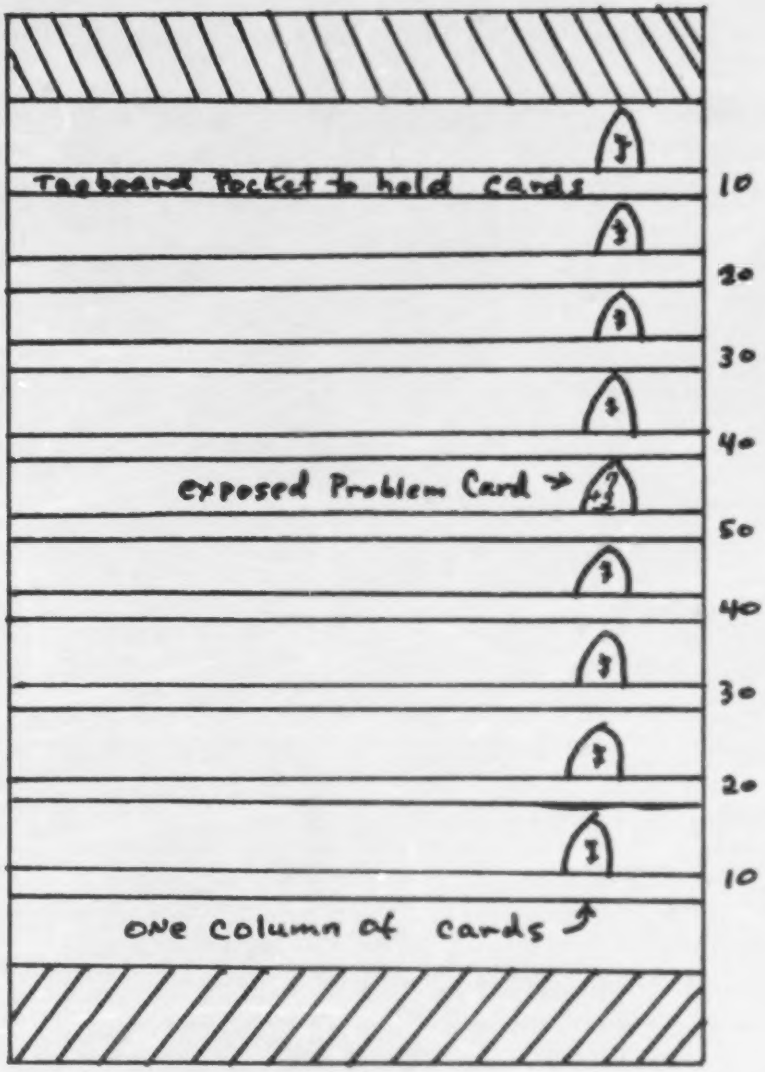


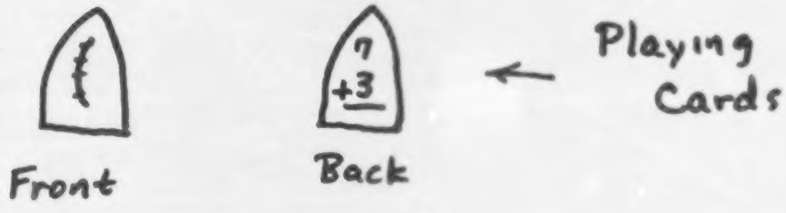
FOOTBALL GAME

Materials:	1 - 4' x 5' piece of heavy cardboard 9 - 1½" x 48" pieces of tagboard magic marker masking tape 3" x 5" index cards stapler
Procedure:	A model of a football field is drawn on the piece of cardboard (see the illustration on the next page). Yard markers are indicated on both sides of the field. The tagboard strips are taped onto the board at the yard markers, to serve as pockets for the problem cards. The problem cards will be placed in columns on the board. The tagboard is stapled to the board between the columns of problems cards (see the illustration). The board will hold eight columns of problem cards. The problems placed on the index cards will be determined by the concept being studied.

INSTRUCTIONS FOR FOOTBALL GAME

1. The class is divided into two teams.
2. A coin is flipped to see which team gets the first problem card.
3. The game begins with the card at the 50 yard line from the first column being turned over. The student is asked to work this problem.
4. If the student gives the correct answer, the next problem down the column is turned over for the next teammate to solve. The team continues to move down a column until a touchdown is scored or a problem is missed.
5. If a problem is missed, this is called a fumble, and the other team takes over the ball. This is done by moving one column to the right and exposing the problem which adjoins the problem that was missed. A player from the other team answers this problem and moves up the second column until a touchdown is scored or a problem is missed.
6. If a touchdown is scored, the team is given six points and the card from the 50 yard line of the next column is exposed. Play continues along this column in the opposite direction of the scored touchdown, with the other team being given the ball.
7. The team with the most points at the end of the game is the winner.


Tagboard Pocket to hold cards
exposed Problem Card
one column of cards

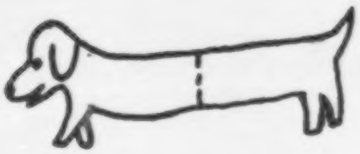

7
+3
Front
Back
Playing Cards

GROW DOGGIE

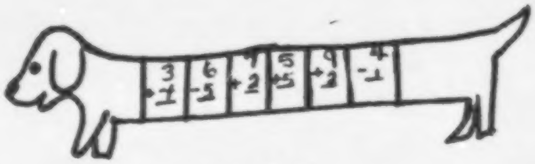
Materials:
6" x 12" piece of tagboard or cardboard
magic marker
2" x 6" deck of tagboard problem cards

Procedure: Cut out the shape of a dachshund from the large piece of tagboard. Cut the dog into two parts as shown in the illustration below. Prepare the deck of problem cards to reflect whatever concept you wish to reinforce.

Instructions: Place the severed dog on the floor or table. The student selects a card from the deck of problem cards. If the child answers the problem on the card correctly he may make the dog grown longer by pulling apart the dog and placing the card in its middle. The next student repeats the above procedure. The object of the game is to see how long you can make the dog.



severed dog



elongated dog

NOTE! A contest could be made of Grow Doggie by having a dog for each student. The object of the contest would be to see who could make their dog the longest.

HAPPINESS IS...

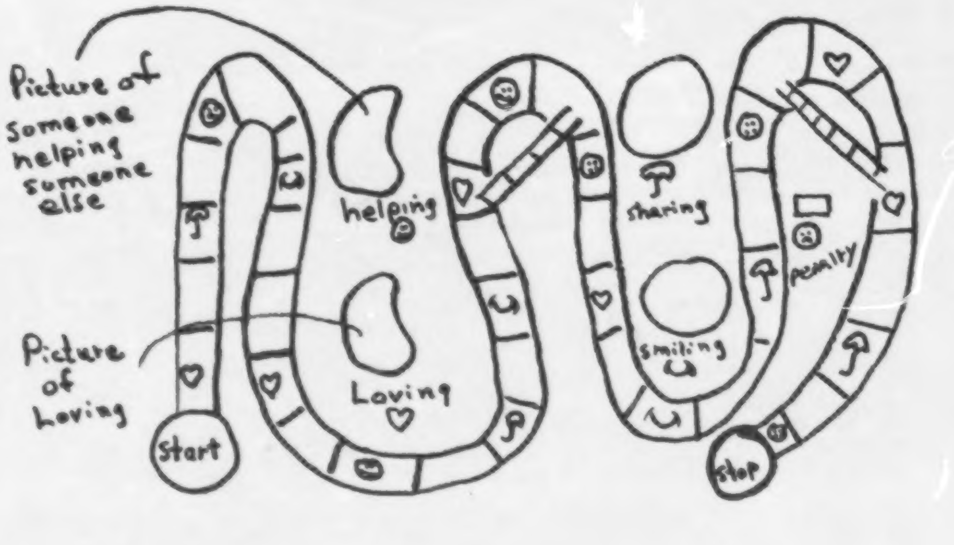
Materials: Follow the construction directions for the basic step-a-set game board.

Procedure: Mark every other square on the path with one of the following.

1. A Smile (SMILING)
2. A Heart (LOVING)
3. An Umbrella (SHARING)
4. A Button (Helping)

Make five decks of problem cards: one deck for each of the four "happiness" areas and one penalty deck decorated with a frowning face.

Instructions: Each pupil rolls the number cube and moves that number of spaces on the game board. (ie., If he lands on a heart he answers a problem from the Heart deck, etc.) If the pupil lands on a blank space he does not have to solve any problems. When an incorrect answer is given, the pupil must draw a card from the penalty deck. These cards should reflect some form of penalty such as, move back one space, lose a turn, move back to nearest heart, etc.) The first child to reach stop is the winner of the contest.


Picture of someone helping someone else
Picture of Loving
helping
Loving
sharing
smiling
penalty
Start
stop

273

INDIVIDUAL CHALKBOARDS

Materials:	12" x 12" piece of 1/8" masonite can of Lucite charcoal paint
Procedure:	The masonite is cut into 12" x 12" pieces. Using Lucite charcoal paint, the smooth side of the masonite is given two coats of paint. A piece of cloth, or regular chalkboard eraser, is used to wipe the chalkboards. If the paint wears thin, through continued use, it can be given another two coats of paint. Enough boards should be prepared so each child in the room has his own chalkboard.

INDIVIDUAL FLANNEL BOARDS

Materials:

9" x 12" felt pieces for kindergarten
12" x 18" felt pieces for grades one and two
9" x 12" and 12" x 18" pieces of cardboard
Elmer's glue

Procedure:

The felt pieces are glued to the cardboard. Double thick cardboard makes the best backs for the felt pieces. Enough felt objects are cut out so each kindergarten child has ten pieces and each student in grades one and two has twenty pieces. (Circles, triangles, squares, and rectangles work best.) Enough boards are prepared so each student in the room has one.

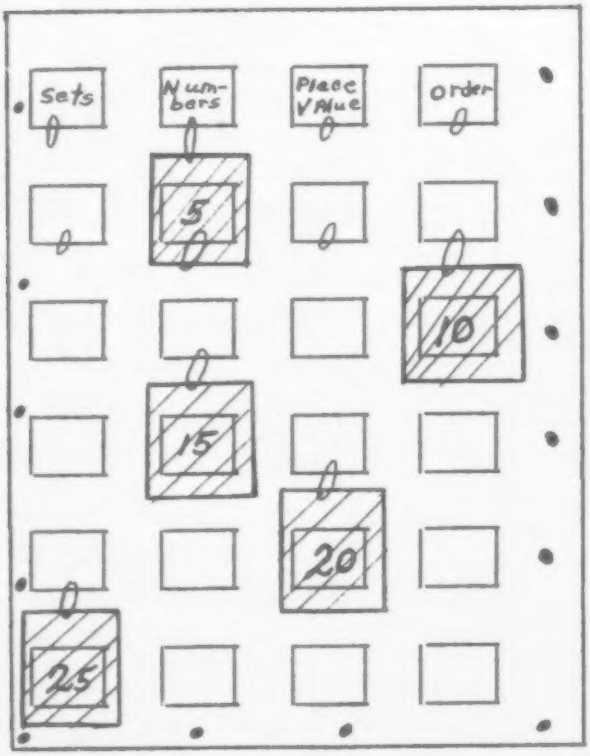
NOTE!

A piece of masonite makes for a more durable backing for the flannel boards. Why not use the backs of your individual chalkboards for your flannel boards.

JEOPARDY

Materials: Two 30" x 42" pieces of cardboard, 20 - 5¼" squares of construction paper, one box of large paper fasteners, one case cutter, three 24" x 36" pieces of tagboard, one box of paper clips

Procedure: Mark off five inch squares on one of the pieces of cardboard as shown in the illustration below. Use the case cutter to cut out these squares. Place paper clips at the bottom of each window. (See illustration below.) Adhere the construction paper squares to the board by using the paper clips. Assign these covers point values. Make the point values 5, 10, 15, 20, 25 according to the row they are in.



Attach the piece of cardboard with the windows in it to the other piece of cardboard by using large paper fasteners along three of the edges. (See the above illustration.) Place a 24" x 36" piece of tagboard between the two pieces of cardboard. This will serve as the problem card. The first row of the board will be used to indicate the different categories. Questions or problems are then written on the tagboard under each category. Make the five pointers easiest and 25 pointers the hardest. Cover each window.

INSTRUCTIONS FOR JEOPARDY GAME

1. Two players or two teams may participate in the game.
2. The child must first select the category from which he wants to answer a question.
3. He must then choose the difficulty of the problem by selecting a point value of the problem.
4. The cover is then removed from the problem the child has selected exposing the problem to him.
5. If he answers the exposed problem correctly, he or his team receives the number of points on the problem cover.
6. If he answers the problem incorrectly, discuss the correct answer with the class.
7. The game continues until all have had an opportunity to answer a question or all problems have been exposed.
8. The winner is the player or team that has accumulated the most points.

LAY AROUND

Materials:

18" x 18" piece of tagboard
1 - cube
4 - decks of 2" x 3" tagboard cards
3 - different colored magic markers

Procedure: Construct the game board as shown in the illustration below. Color the squares alternating colors using three different colored magic markers. Write the numerals 1, 2, 3 on the sides of the cube.

G - Green

Y - Yellow

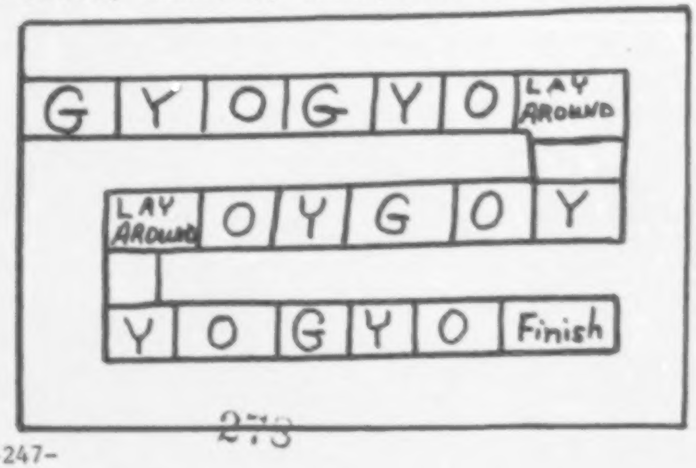
O - Orange

Color code the tagboard cards to match game board colors. Place an L on Lay Around cards.

Instructions:

1. The first child to the end loses the game.
2. The child rolls the cube.
3. The child moves his character the number of spaces shown on the cube.
4. If the child lands on a colored space, he must pick a card from the deck coded with that color.
5. If the child answers the problem correctly, he remains on that space.
6. If the child misses the problem, he must move one space forward.
7. If the child lands on a lay around space and answers the problem on its card, he may roll the cube and move backward the number of spaces shown on the cube.

* Variation: KUNG FU
Played the same. Only difference is to mark "lay around" squares as PEACE, HARMONY, TRANQUILITY, LOVE, etc.)



MAKE-A-PUZZLE

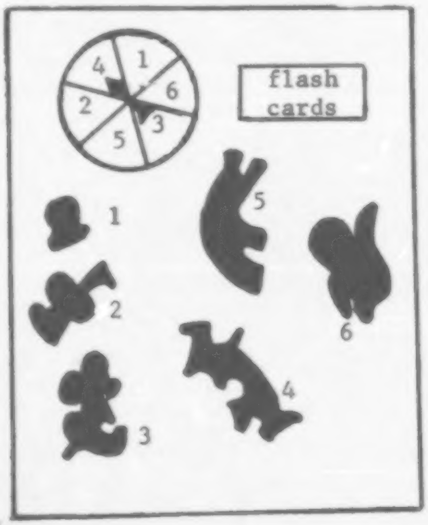
2-6 Players

Materials:

poster board 22" x 28"
6 pizza rounds
2" x 4" piece of cardboard
1 paper brad
glue
Small set of flash cards for operation to be practiced.
magic markers
sandpaper (fine grain)
10" diameter tagboard circle
6 distinctive magazines ads
(I used 3 full page human faces--1 couple, Hank Aaron and Willie Mayes (magazine cover) and a full page Kawasaki ad.)

Procedure:

1. Cut out and glue 1 magazine ad to each pizza round.
2. Develop a puzzle with six big distinctive interlocking pieces on the tagboard circle. Cut it apart to use as a pattern.
3. Use the tagboard pattern to cut six puzzles out of the pizza rounds, with the case cutter.
4. Sand down the rough edges on the puzzle pieces so all 36 will fit together randomly into six jumbled puzzles.
5. Take the tagboard pattern and draw around each of the six puzzle piece shapes, with none of them touching. (see diagram) Color with magic markers, to make them prominent. Give each puzzle piece shape a number, 1-6.



6. Draw an 8" diameter circle on the poster board and divide up into 6 equal pie sections with the magic markers. Put 1-6 in each of six sections, one number in each to make a spinner.

7. Cut an arrow out of the cardboard, color with magic marker, then put on spinner circle with brad.

8. Draw a square where flash cards will be placed.

Playing Instructions:

A player can make one of three moves on his or her turn. One is to spin the spinner and take the puzzle piece corresponding to the number spun. In order to keep the piece the player must answer a flash card drawn off the board. The second option is for two players , by mutual agreement, to trade 1 piece for another piece. In order for the trade to go through, both players must draw a flash card and answer correctly. The third option involves one player who wants to trade and one who doesn't. The player who wants to trade, challenges the unwilling trader. A flash card is shown both players simultaneously. The first one to give the correct answer gets his or her way.

Method I (20 min.)

Goal: To get one whole puzzle or any six pieces. The first player to do so is the winner.

Method II (30-40 min.)

Goal: To get six pieces of the same puzzle by the three ways described above. First player to do so wins.

Method III (30-40 min.)

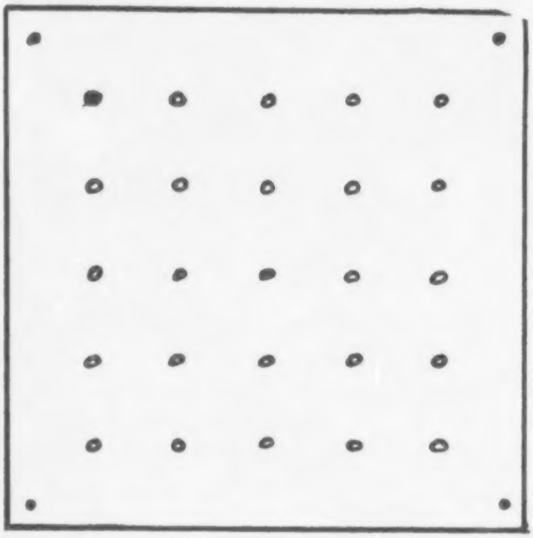
Goal: To get one piece from each of the six puzzles. The player who does this wins the game.

Methods II & III are more complicated, and help students develop logical thought as they plan strategies to get the puzzle pieces they want, and at the same time keep the other players from getting the pieces they want through trading or challenges.

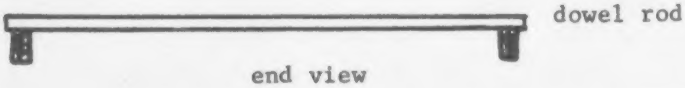
PEGBOARD GEO BOARD

Materials: 6" x 6" piece of pegboard (5 hole by 5 hole)
½" pieces of ½" dowel rods
small nails

Procedure: The dowel rods are nailed to the corners of the pegboard — to serve as feet for it (as shown in the illustration).



top view



end view

PIN BALL MATH

Materials:

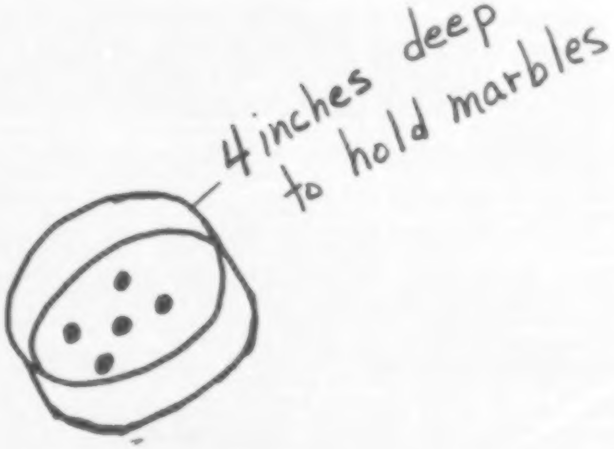
- two 10" circles of cardboard
- one 10" circle of paper
- 4" piece of wide tagboard to go around cardboard circles
- two marbles

Procedure:

Cut eyes, nose, and mouth out from one of the cardboards, glue the cardboards together with the 10" piece of paper between them. Write numerals on the paper in the eyes, etc. Glue the 4" strips of tagboard around the edge of the circles. Indicate on the side of the 4" strip what the concept will be.

Instructions:

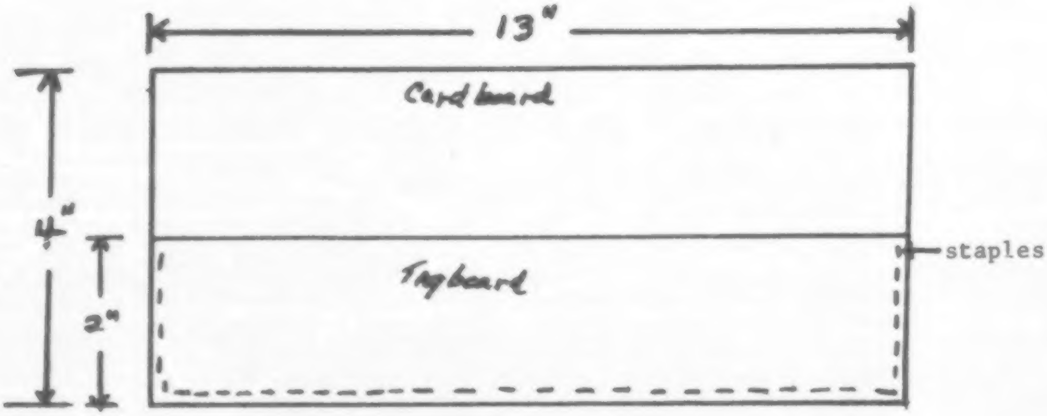
A child holds the game in his hands and moves it around until he can get the two marbles into two of the holes. When he does this he then writes the problem down so that the teacher can check it later on to see what he has been doing.



SHOW-ME-BOARD

Materials: 4" x 13" piece of cardboard
2" x 13" piece of tagboard
staples

Procedure: The tagboard is stapled on the cardboard as shown in the following illustration. It forms a pocket that will hold cards. 2½" x 3½" tagboard cards, showing numerals and symbols, can be made. They must fit into this pocket. Number sentences can be formed by placing the correct cards in the "show-me-board." The teacher can see if the child has the correct number sentence by having him hold up his "show-me-board" for observation.

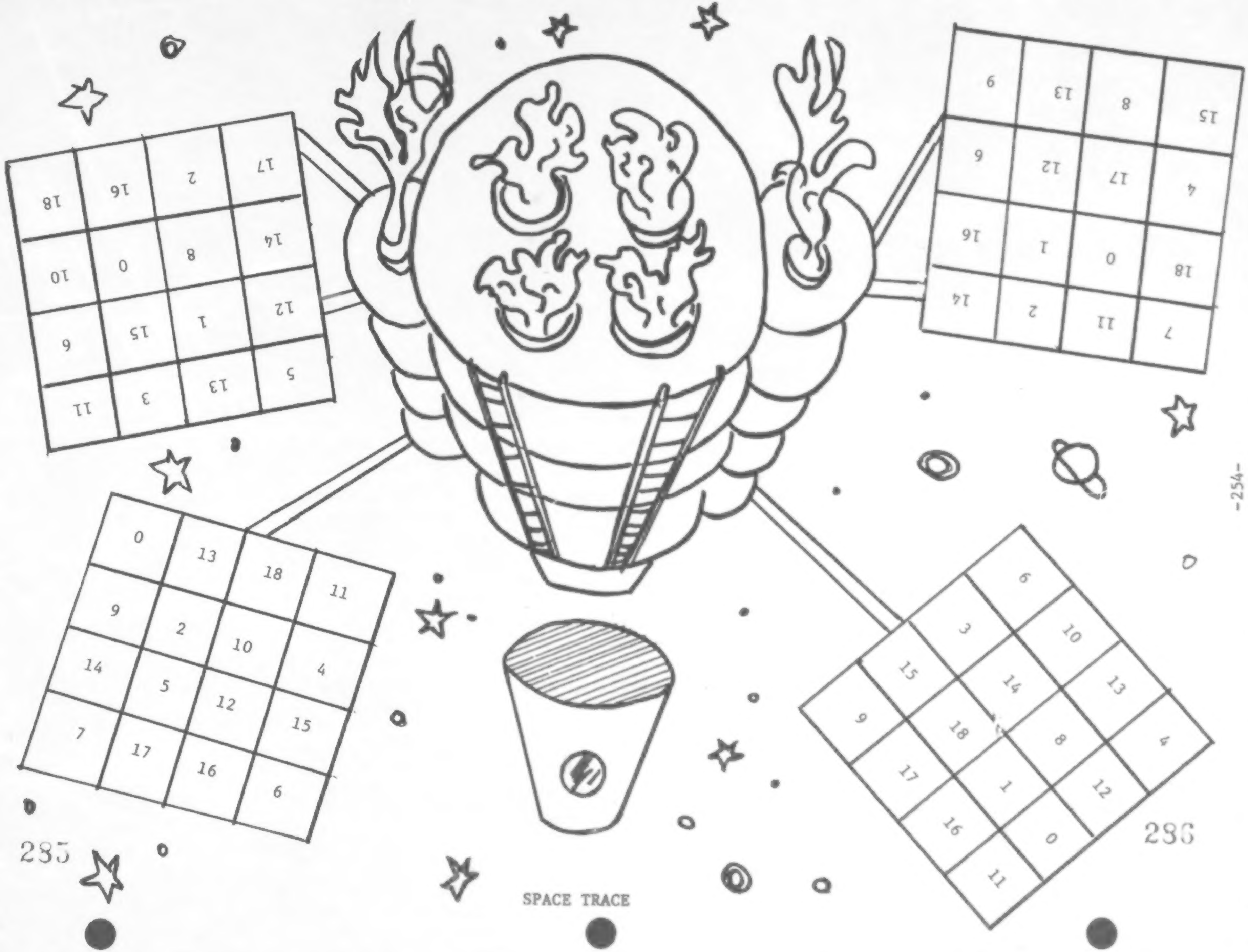


SPACE TRACE

Materials:
5 game cubes
Game Board
60 game markers

Procedure:
Mark numbers on the faces of three of the cubes.
Mark operation symbols on two of the cubes.
Construct a game board similar to the one illustrated.

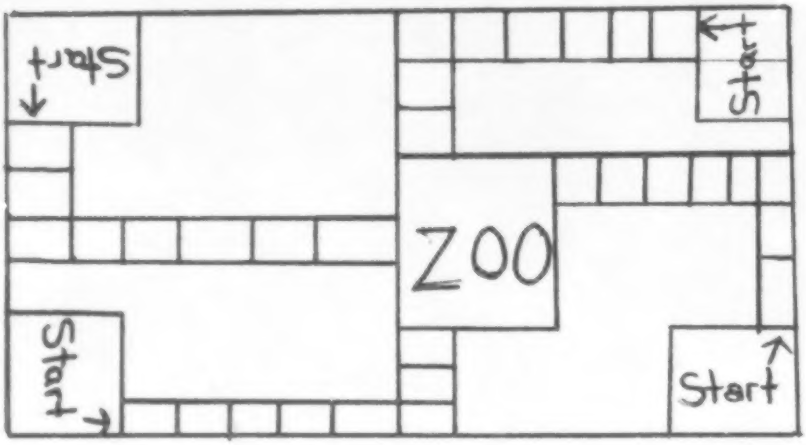
Direction:
Roll one of the cubes to decide who goes first.
The person with the lowest number will be first.
Then, take turns rolling all 5 cubes.
Make a number expression using the numbers and operations.
Find the value of your expression and cover this number on your space panel.
The first player to cover one row, one column, or one diagonal on his/her panel is the winner.


5 13 3 11
12 1 15 9
14 8 0 10
17 2 16 18
7 11 2 14
18 0 1 16
4 17 12 9
15 8 13 6
0 13 18 11
9 2 10 4
14 5 12 15
7 17 16 6
6 10 13 4
3 14 8 12
15 18 1 0
9 17 16 11
285
286

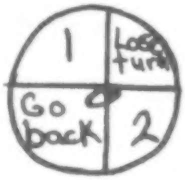
SPACE TRACE

TAKE ME TO THE ZOO

Materials and Procedure: Make the following diagram on tag board 18" x 24".



Make a spinner by punching a hole through the center of a coffee can lid. Place a brad through a paperclip and fasten to the lid.



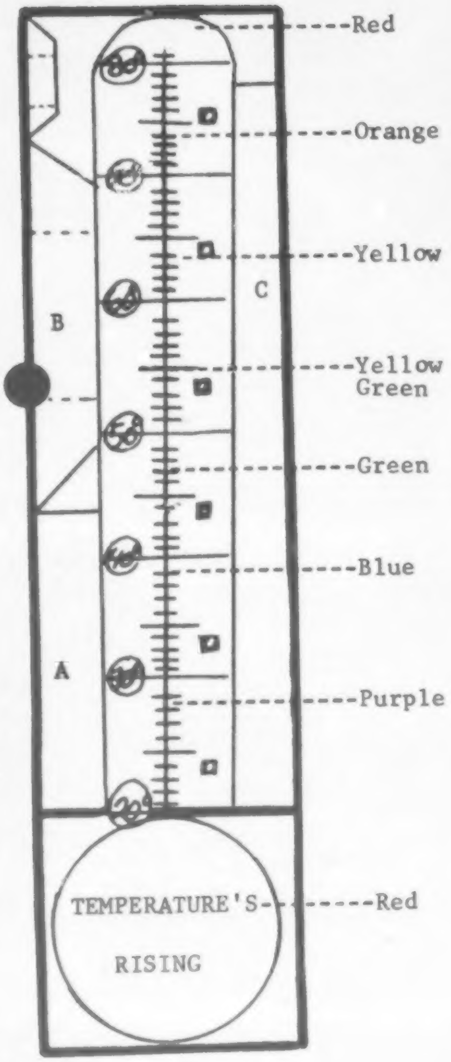
Instructions: Each player places his marker in starting box. (Could use small zoo animals.) The first player is chosen. He spins, moves and passes the spinner to the player on his left. The first player to place his animal in the zoo wins. (Number Facts can be placed in each of the spaces on the path)

TEMPERATURE'S RISING

OBJECT - Speed Drill

MATERIALS: Cardboard 6ft. x 1½ft.
paint (bright colors)
rubber magnet
7 library card pockets,
red construction paper,
paper clips (lots)

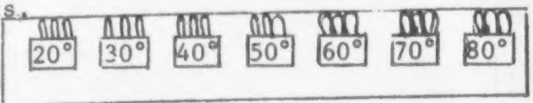
CONSTRUCTION:



1. Cut out a big thermometer shape from cardboard as shown. Piece A is the mounting for library card pockets which will hold little problem cards. Piece B is the base for the thermometer if it is to be free standing. Piece C is the back brace. Piece D is the back brace for A.

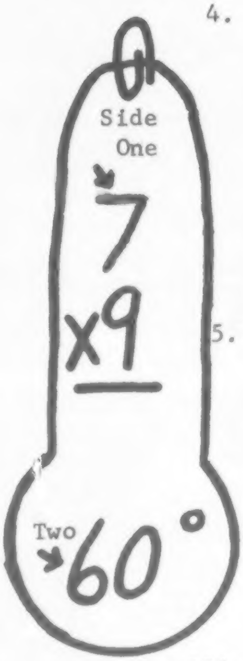
2. Glue and staple back brace and base onto thermometer.

3. Take piece A and mount library card pockets with glue. (Works best if only lower half of pocket used.) If it is to be free standing, base A should be made. Assign degree (point) values to pockets.



4. Cut little thermometers out of the construction paper. Write a problem on one side of the thermometer and point value on the other side. (I put the points on according to where the answer fell. For example - 63 is between 60 and 70 so its point value is 60.) Put paper clips on the end of each one.

5. Divide up main parts of the thermometer into a number line at the end. Paint every 10°'s a different color. Do the degree scale in black magic marker with ones a certain size, fives twice as big, and tens clear across.



6. Put piece of rubber strip magnet (3/8" is plenty) in each ten degree area to hold problem cards.

7. Fasten construction paper circles with degree readings on each 10° line with masking tape to make them changeable.

PROCEDURE

1. One student (or aide) places a problem of assigned degree value on magnet in the proper degree range, for each 10°'s on thermometer.

2. The 20° (or lowest degree problem) is turned over and read aloud. The first student to get it right (except the person officiating) keeps it, until the end of the game.

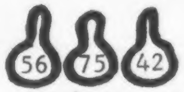
3. The priviledge of officiating can rotate so each student gets a turn.

4. At the end of the time period, or when the problems run out, the player with the most points wins.

VARIATIONS

This idea can be adapted to any age Kindergarten thru 9th grade. Degree marks are a simple number line, so anything done with a number line can be adapted to this. The 10° units can be emphasized to do anything from regrouping and place value, to identifying numbers.

EXAMPLE

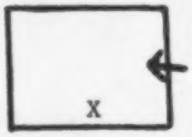
Take numbers like  and place them randomly on the magnets, then have a student (or team) see how rapidly they can put them into the correct bracket of 10, (56: 50-60) (75: 70-80) (42: 40-50) then give another student (or team) a chance to beat that time. (Same idea works for all kinds of problems.)

* * * * * *

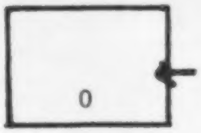
TIC-TAC-TOE GAME

Materials: 1 - 24" x 24" piece of tagboard
6 library pockets

Procedure: The library pockets are taped to the 24" x 24" piece (as shown in the illustration). Masking tape is used to divide the board into nine sections (each having a pocket large enough to hold a 4" x 6" index card). The library pockets are labeled (as shown in the illustration).



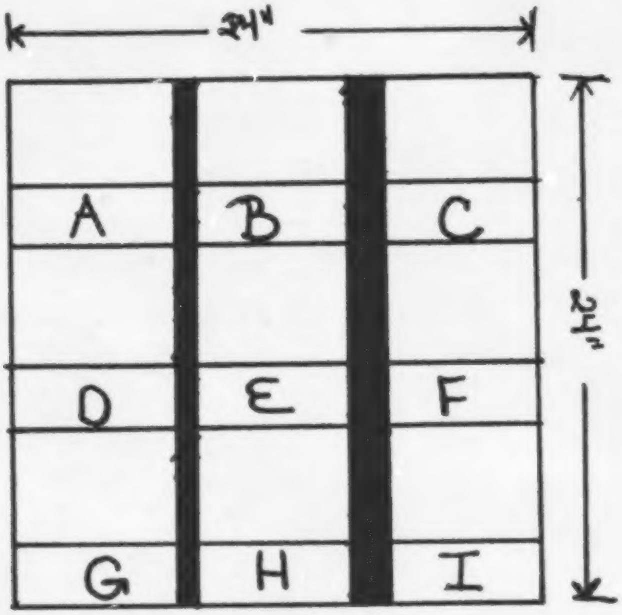
Place number problem here



Leave this half of card blank

When the cards are placed in the pockets, only the blank half of the card should be exposed.

Use pockets



Instructions for
TIC-TAC-TOE GAME cont.

1. The class is divided into two teams. One team "x" and the other "o."
2. A coin is flipped to see who has the first turn.
3. The first player on a team chooses one of the cards, labeled A-I, to be his problem.
4. The card is turned over, exposing the problem to be answered.
5. The child is given ten seconds to give the correct answer.
6. If he is correct, his team's symbol ("x" or "o") is exposed in that position.
7. The other team then calls for a card, in one of the other position, to be exposed.
8. The card is turned over, and the child has an opportunity to answer the problem.
9. If anyone misses his problem, the card is turned back to its original position and the other team takes its turn.
10. The winner is the team that exposes three of its symbols ("x" or "o") in a row.
11. If neither team wins, then new cards are inserted in the board, and another game is played.

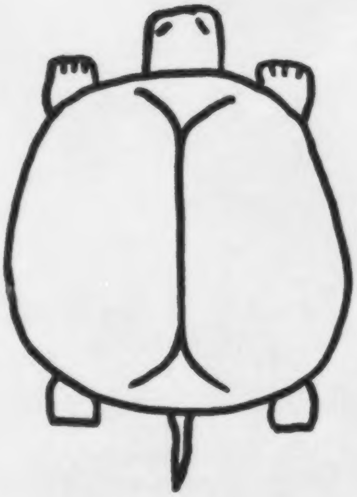
TURTLE RACE

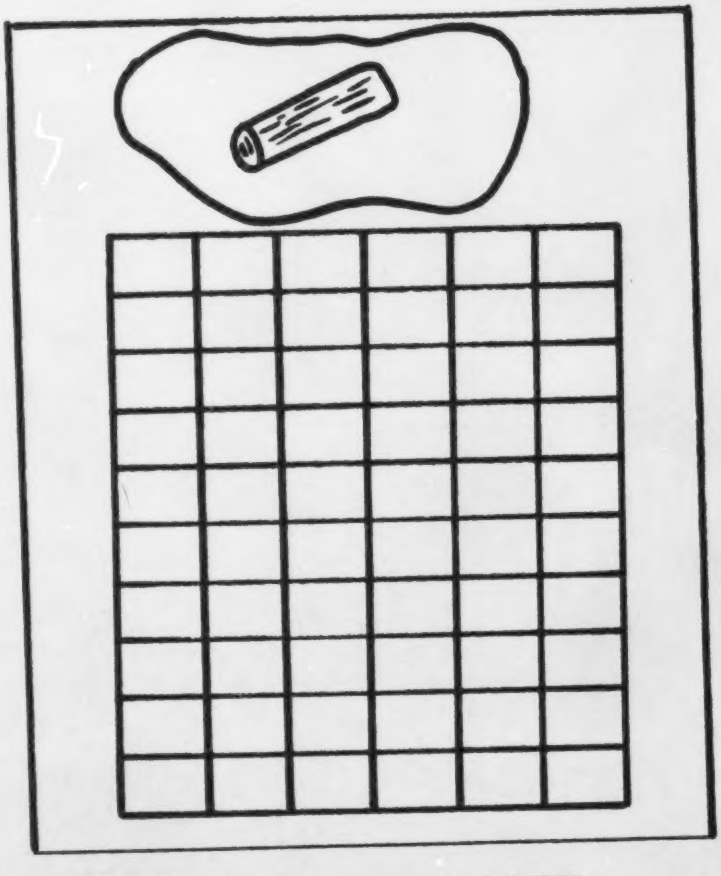
Materials:

22" x 28" tagboard
magnet strips
construction paper
5 small pieces of tagboard
egg carton or walnut shells

Procedure: A model of a racetrack is drawn on the tagboard with a pond at one end of the playing board. Draw a log in the middle of the pond. Draw an outline of a turtle on the small pieces of tagboard. Cut out those outlines and glue the walnut shell to the turtle cutouts. Draw five lanes on the track and divide each lane into ten steps. Place a turtle in each lane on the first step. Prepare a deck of number problem cards. Place the cards upside down in a stack on the table.

Instructions: The maximum number of students that can play is five. The students should take turns taking problem cards from the top of the stack. If the student answers the problem, he may move one step forward on the racetrack. The winner is the player whose turtle reaches the log first.





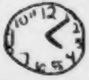
MAKE AS MANY TRACKS AS DESIRED

WHAT'S YOUR BAG?

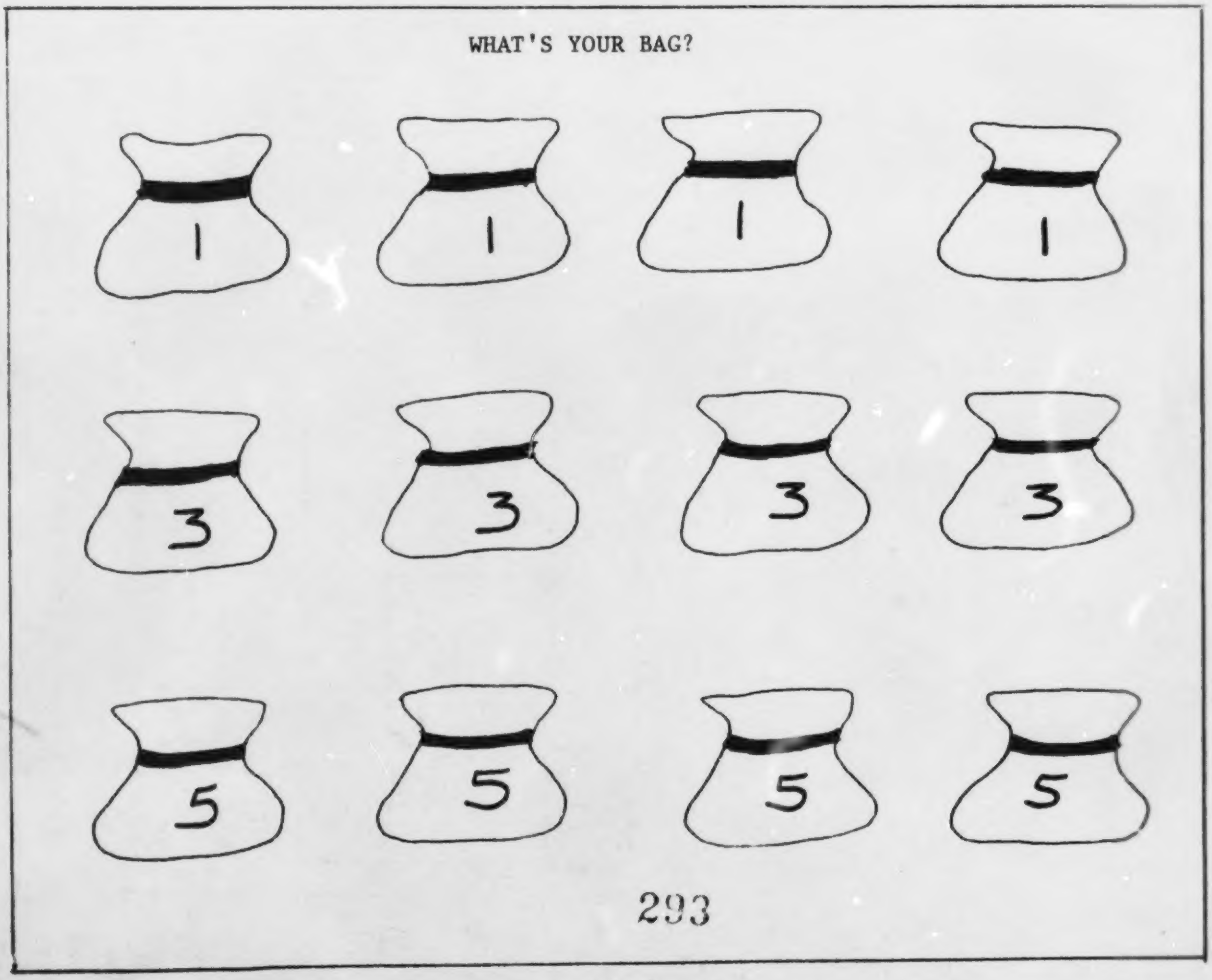
Materials: Game board 22" x 28"
12 bakery bags folded to desired size
Deck of problem cards on variety of manipulative items

Procedure: Write a value on each bakery bag with points (harder problems highest valued bag)
Make up problems for card deck for concept desired or gather necessary manipulative items. Place cards or items into bags.

Instructions: Pupil chooses bag he wishes to "work."
If he does the work correctly, he (or his team) receives the number of points shown on bag.
i.e. A 6 pt. bag could contain problems like these!

1. 29 - 17 = $\boxed{?}$
2. .... (Arrange 8 bottle caps into 2 equal piles)
3. 9 + 4 + 3 = $\boxed{?}$
4. 1/3 + 1/3 = $\boxed{?}$
5.  = $\boxed{}$ (4:05)

A 1 point bag would have much easier problems.



WICHITA WIN-O

Materials:

90 cards cut to size 2" x 3"
1 piece tagboard - size 22" x 28"
5-6 Wichita postcards
4-6 playing pieces (cubes, counters, bottle caps, etc.)

Procedure:

Rule tagboard into 2 inch squares. Plan routes for 4 to 6 players. The routes should encompass approximately 30 of the 2 inch squares. The goal for each route should be one of the Wichita postcards, (i.e., player one attempts to reach Century II, player two attempts to reach Friends University, player three attempts to reach Cow Town, etc.)

Cards are marked with problems to be answered. On at least 18 cards there should be penalties.

Suggestions:

School Zone--	go back 1 space
Slow Truck--	go back 2 spaces
Survey Crew--	go back 2 spaces
Left Lane Closed--	go back 2 spaces
Funeral Procession--	go back 3 spaces
Road Repair--	go back 3 spaces
Accident Ahead--	go back 4 spaces
Water Across Road--	go back 4 spaces
Ambulance Siren--	go back 5 spaces
Out of Gas--	go back 5 spaces
Fire Truck Siren--	go back 6 spaces
Speeding (Radar)--	go back 6 spaces
Detour--	go back 7 spaces
Police Car Siren--	go back 7 spaces
Road Closed (Canal Route)--	go back 8 spaces
Traffic Stalled--	go back 8 spaces
Flat Tire--	go back 8 spaces
Traffic Light is Out of Order--	go back 9 spaces

Instructions:

Cards are placed in the center of the playing area. Each player in turn draws a card. If it is a problem card and he answers incorrectly, he moves back one space. (Penalty cards provide an element of chance.) The first player to reach his goal in Wichita Win-O is the winner.

X MARKS THE SPOT

Materials:

1 game board, approximately 22" x 28"
Deck of 23 cards, 2 x 3 (for each player)
Deck of 20 chance cards, 2 x 3
4-6 plastic pirates (available at cake decorating stores)

Procedure:

Mark game board into pathways, all of which lead to a "treasure chest" area. Each pathway should be at least 15 "steps" in length. Name the pathways to match the decks listed below.

Mark each deck of 20 cards with the problem desired. Each deck will be a students map to the treasure. Add three "chance" cards to each deck.

Name the deck for each player:
BLUEBEARD
CAPTAIN KIDD
ONE EYE
LONG JOHN
PEG LEG
PISTOL PETE

Mark the deck of CHANCE Cards using ideas such as the following:

Forward	Rocky Ridge--	forward 1 pace
	Marked Tree--	forward 1 pace
	Rusty Shovel--	forward 1 pace
	Lucky Turn--	forward 2 paces
	Sunrise Mt.--	forward 2 paces
	Arrow Point--	forward 2 paces
	Pirate's Cove--	forward 3 paces
	Missing Part of Map--	forward 3 paces
	Twin Peaks--	forward 3 paces
Back	Dead Man's Gulch--	back 1 pace
	Wrong Turn--	back 1 pace
	Poison Ivy--	back 1 pace
	Hanging Tree--	back 2 paces
	Sandy Bog--	back 2 paces
	Lost a Skirmish--	back 2 paces
	Walk the Plank--	back 3 paces
	Thick Undergrowth-	back 3 paces
	Quick Sand--	back 3 paces

Instructions:

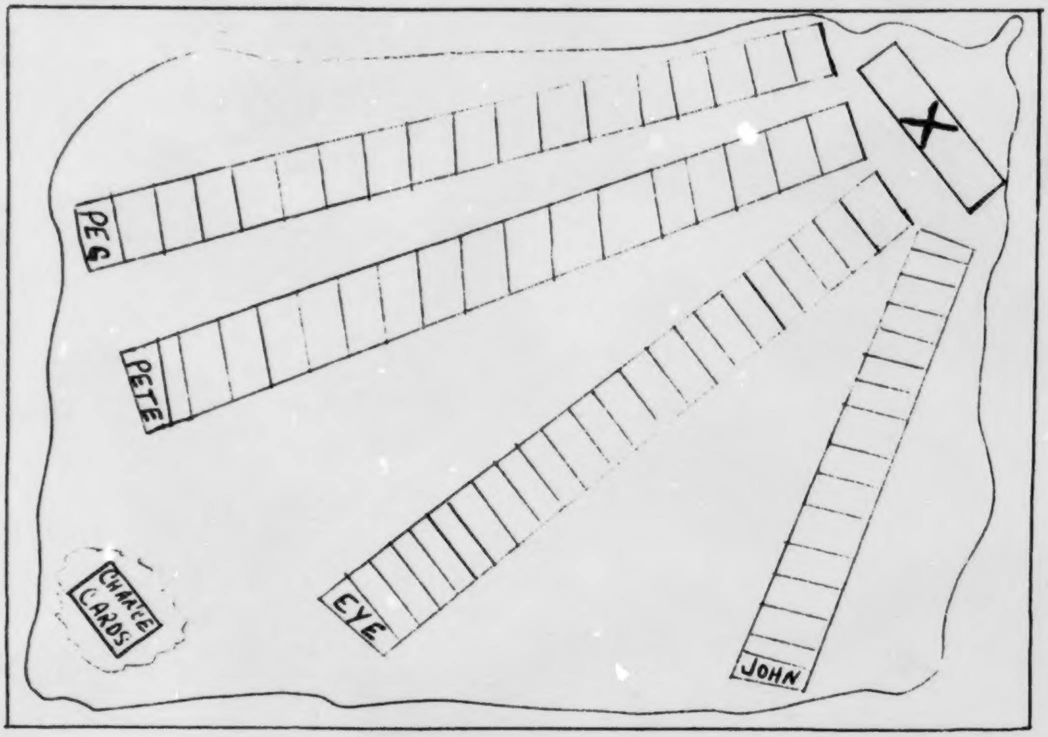
Each player chooses a name and deck of cards. He places his pirate on the appropriate pathway.

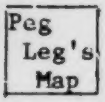
Each player in turn takes his first card from his "map." If it is a problem card and he answers correctly he moves forward one pace. An incorrect answer means he moves back 1 pace.

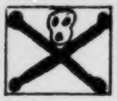
Instructions for
X MARKS THE SPOT cont.

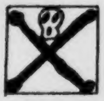
If the card he turns over is a chance card, he takes one chance card from that deck and moves forward or backward depending on his instructions.

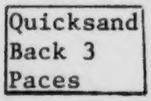
The first player to reach the treasure chest area is the winner.


PEG
PETE
EYE
JOHN
X
CHANCE CARDS


Peg Leg's Map






Quicksand
Back 3
Paces

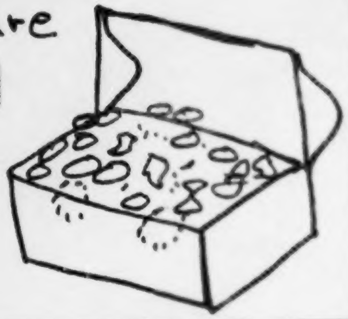
Contains 20
problem cards
and 3 PLAIN
chance cards

Marked with skull
and crossbones on
one side and directions
on the back.

(The advantage of individual decks or "maps" is that the teacher can "load" one for addition, another for subtraction, etc., i.e., The game can be played even though each child is working on a different concept.)

Cards - These could be dittoed to save time, 2" x 3"

Treasure Card



Clear Sailing
Move up
2 inches

Wind has
blown you
back 2 inches

Heavy Rain
miss next
turn

Ahead
Move back
2 inches

Close behind
Move up
1 inch

Steal
2 Treasures

Cards may also tell them to move in half inches.

etc.

Step
A
Set

STEP-A-SET GAMES

Materials:

1 - 22" x 28" piece of posterboard or pellon
A playing piece for each participant
A cube
A deck of problem cards

Procedure:

A winding pathway is formed with as many "steps" as desired. The pathway may be in the shape of a snake, along the edges of the game board, a staircase, etc.
Decorative designs and playing pieces to match the decor of the game may be added to spruce up the appearance of the basic board.

Instructions:

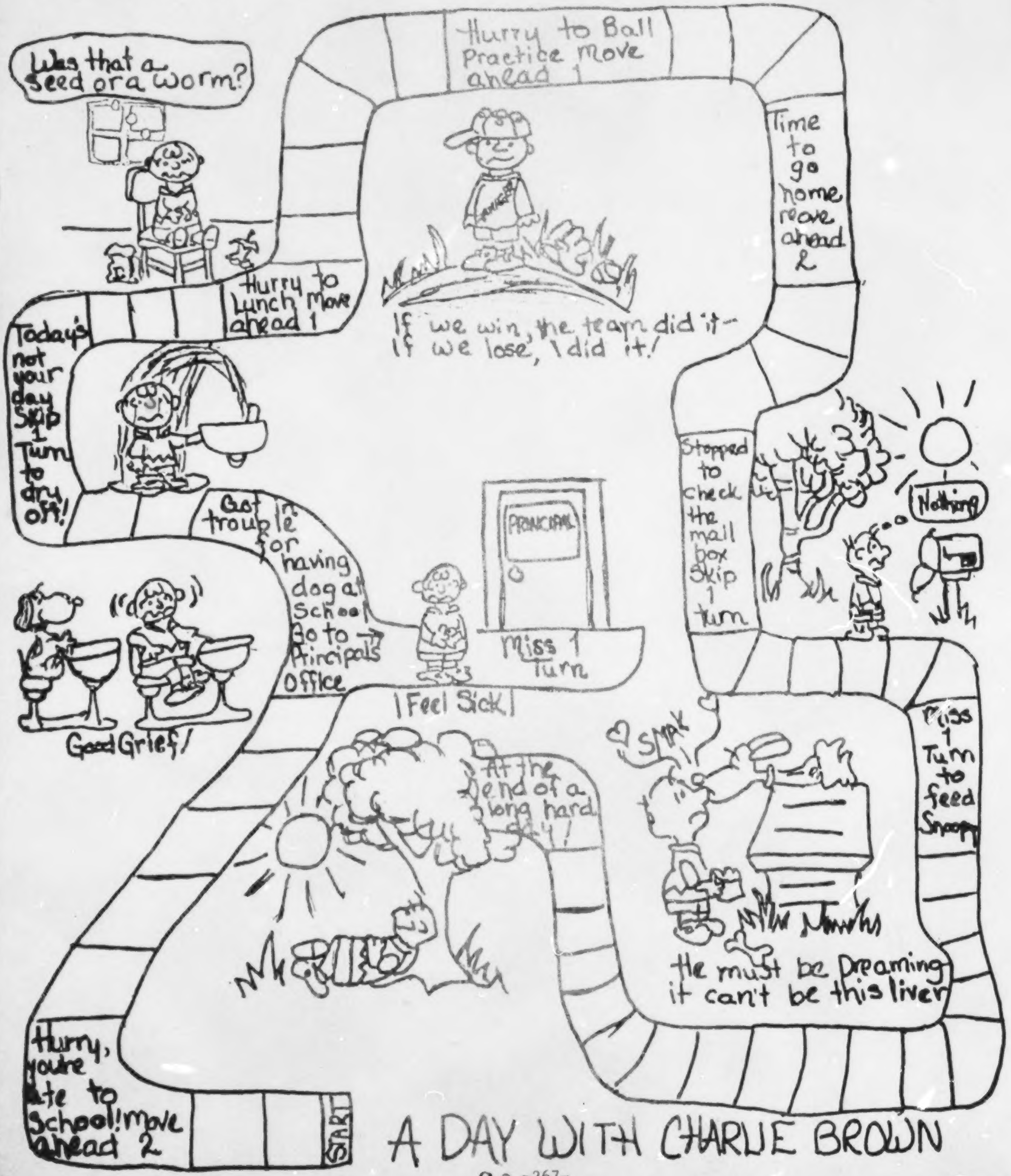
All step-a-set games may be played with two to six players at a time. Each player should be given a different playing piece. Each student must draw a problem card from the deck of cards. They must give the correct answer to the problem, before they are allowed to move along the pathway. A cube showings sets or numerals on its faces is thrown to determine how many spaces the child may advance on the pathway. Each child rolls the cube and advances down the pathway the indicated number of steps. The first child to move his playing piece to the finish line is the winner of the game.

NOTE: Change decks of problem cards to match student needs.

The games listed below are all basic "step-a-set." Use them for file folder games or make a larger game board using their format. The above instructions will apply to all games.

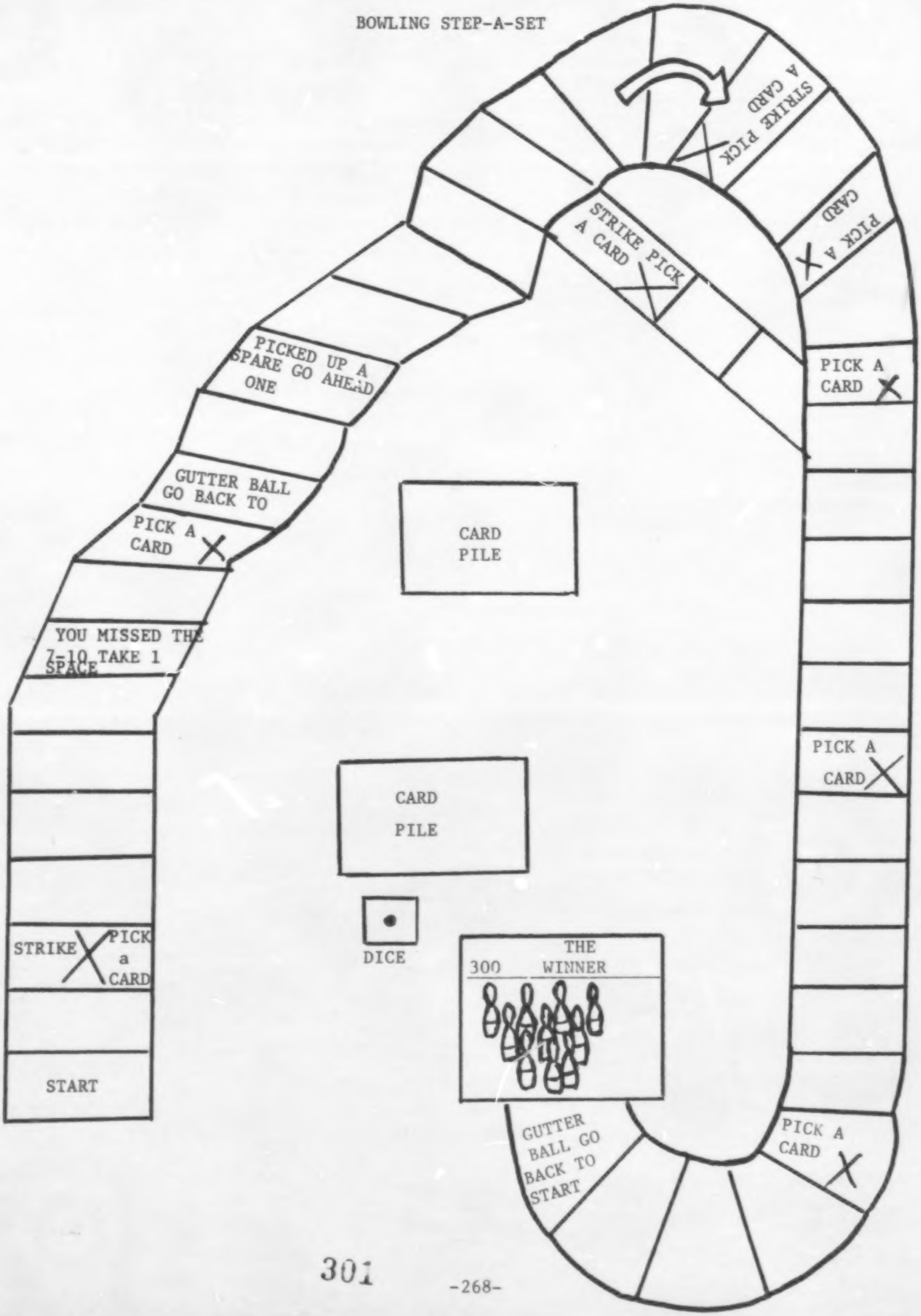
A Day With Charlie Brown
Bowling
Car Race
Cat And Mouse
CB Air Waves
Dr. Seuss
Figure 8 Race
Follow The Yellow Brick Road
Happiness Is
Jungle Game
Lady Bug
Lasso In A Win With Mickey
Mobile Race
Mouse-O-Math
Patchwork Snake
Pot Of Gold
Snail-O-Math
Snoopy
The Incredible Hulk
The Little People
Trip To Happy Face

This is a basic step-a-set game.


Was that a seed or a worm?
Hurry to Ball Practice move ahead 1
Time to go home move ahead 2
Hurry to Lunch Move ahead 1
If we win, the team did it — If we lose, I did it!
Today's not your day Skip 1 Turn to dry off!
Got in trouble for having dog at School Go to → Principals Office
PRINCIPAL
Miss 1 Turn
Stopped to check the mail box Skip 1 turn
Nothing
Good Grief!
I Feel Sick!
At the end of a long hard day!
SMAK
Miss 1 Turn to feed Snoopy
He must be Dreaming it can't be this liver
Hurry, you're late to school! move ahead 2
START

A DAY WITH CHARLIE BROWN

BOWLING STEP-A-SET

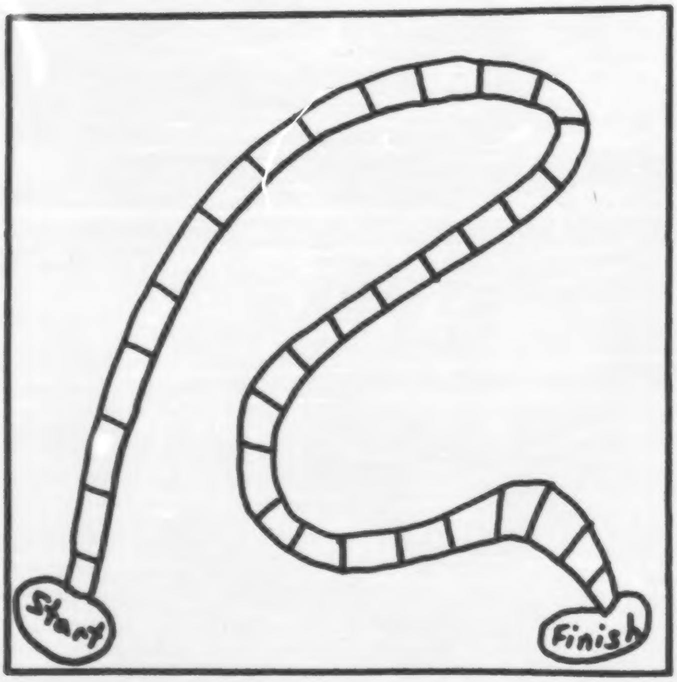

START
STRIKE PICK a CARD
YOU MISSED THE 7-10 TAKE 1 SPACE
PICK A CARD
GUTTER BALL GO BACK TO
PICKED UP A SPARE GO AHEAD ONE
STRIKE PICK A CARD
STRIKE PICK A CARD
PICK A CARD
PICK A CARD
PICK A CARD
PICK A CARD
GUTTER BALL GO BACK TO START
CARD PILE
CARD PILE
DICE
300
THE WINNER

CAR RACE

Materials: Follow directions for basic step-a-set construction

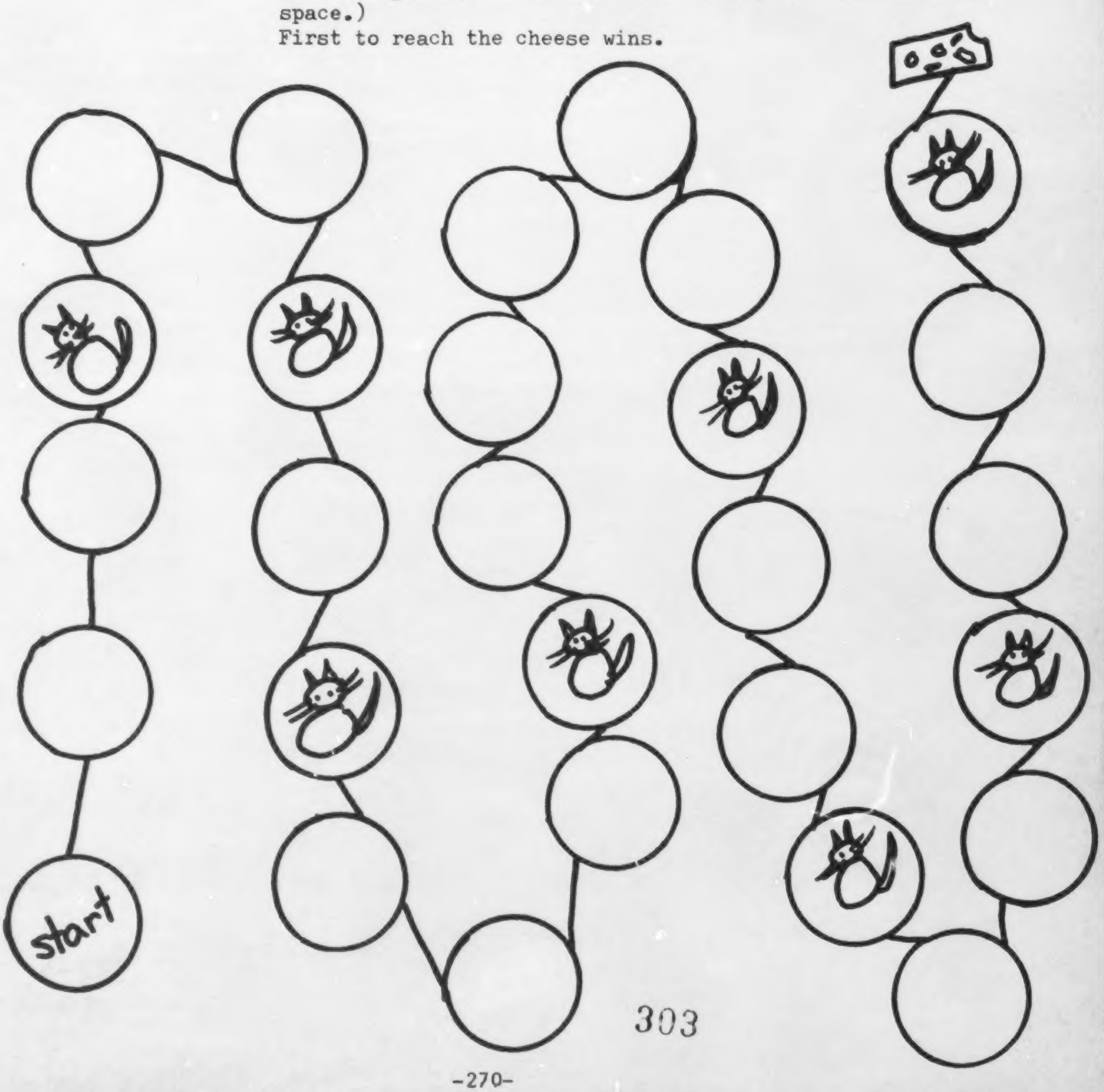
Procedure: Path is a race track--playing pieces are cars. Randomly place obstacles on (i.e., blow-out, [lose one turn]; pit stop, [back up two spaces]; yellow flag, [lose one turn]; oil slick, [move back to start]). Make one deck of problem cards (+, -, x).

Instructions: Each pupil rolls a number cube and moves the number of spaces shown on the face of the cube. If he does not land on an obstacle space he draws a problem card from the deck. A correct answer means he remains on the space. An incorrect answer may mean loss of his next turn or his return to the space from which he moved. The first child to the finish line wins the CAR RACE.



CAT AND MOUSE

Materials:	Follow directions for basic step-a-set construction
Procedure:	Cats are placed randomly on path. Cheese is placed at the finish line. Make one deck of problem cards Playing pieces are mice.
Instructions:	Cube is rolled--pupil moves mouse that number of spaces--if the cat doesn't catch him (this means a lost turn), the pupil draws a problem card. A correct answer means he remains. An incorrect means he moves back one space. (If this places him in the cat's claws, he loses another space.) First to reach the cheese wins.



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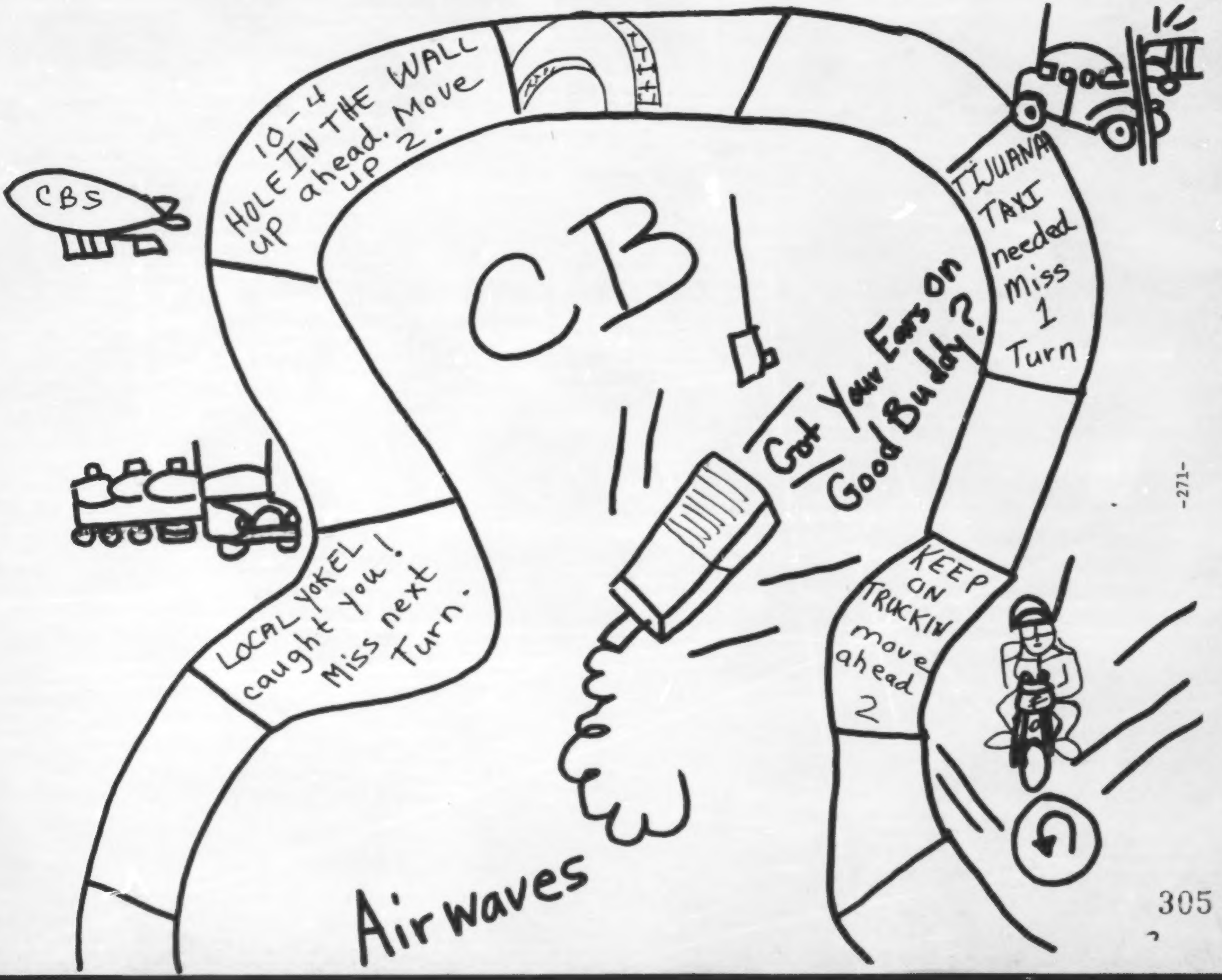
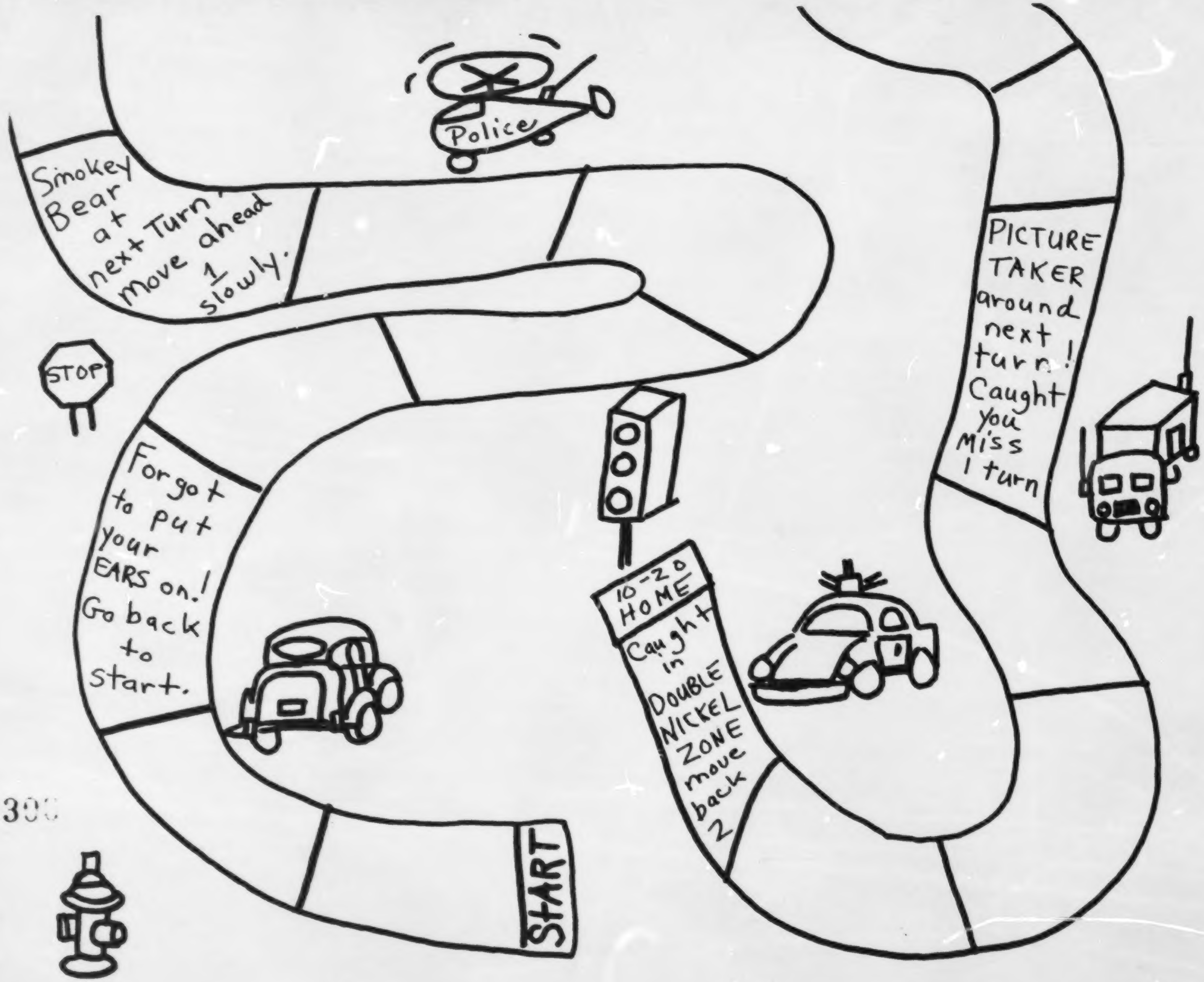

CBS
10-4
HOLE IN THE WALL up ahead. Move up 2.
CB
Got Your Ears on Good Buddy?
TIJUANA TAXI needed Miss 1 Turn
LOCAL YOKEL caught you! Miss next Turn.
KEEP ON TRUCKIN move ahead 2
Airwaves


Smokey Bear at next Turn! move ahead 1 slowly.
Police
STOP
Forgot to put your EARS on.! Go back to start.
10-20 HOME
Caught in DOUBLE NICKEL ZONE move back 2
PICTURE TAKER around next turn! Caught you Miss 1 turn
START

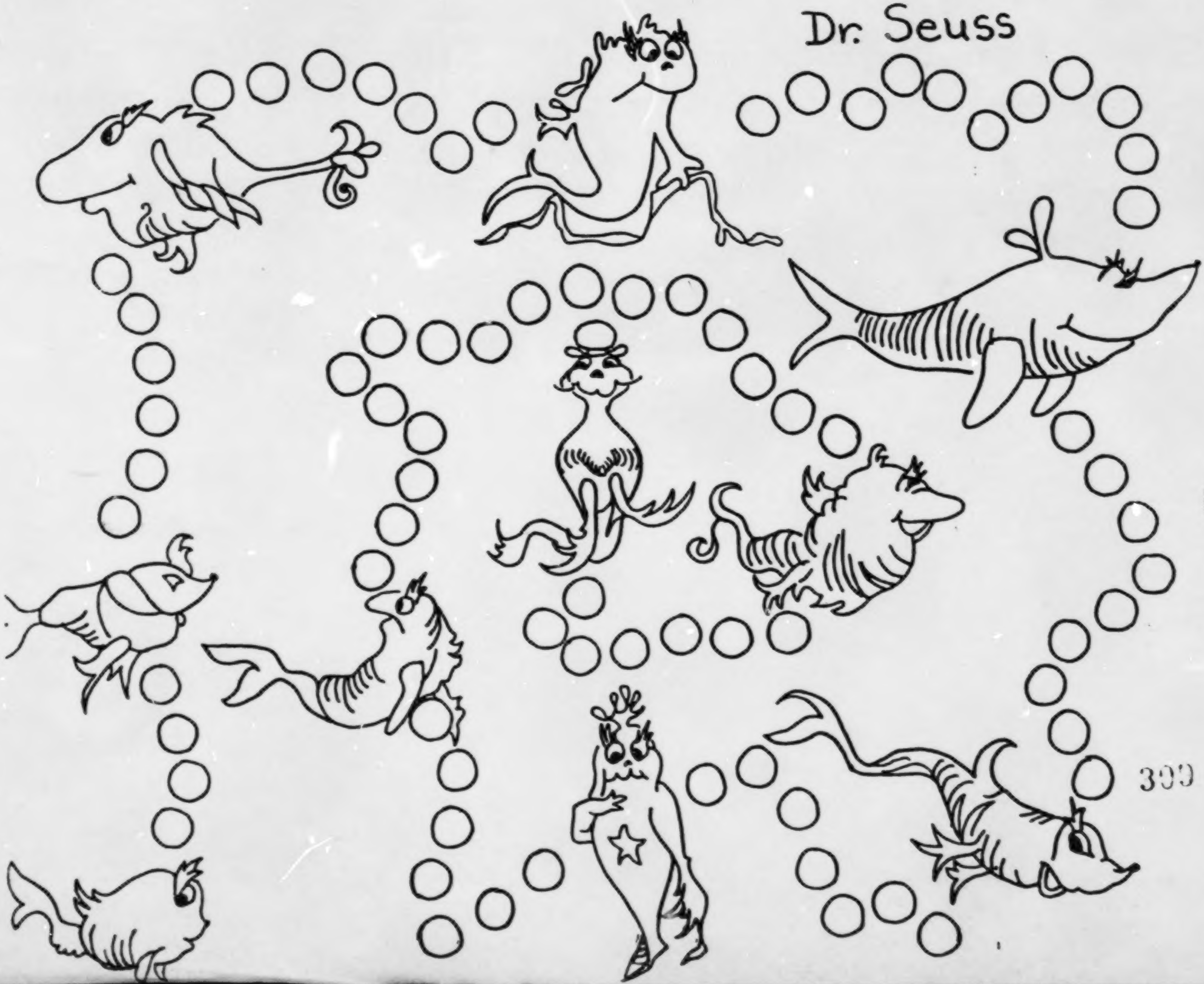


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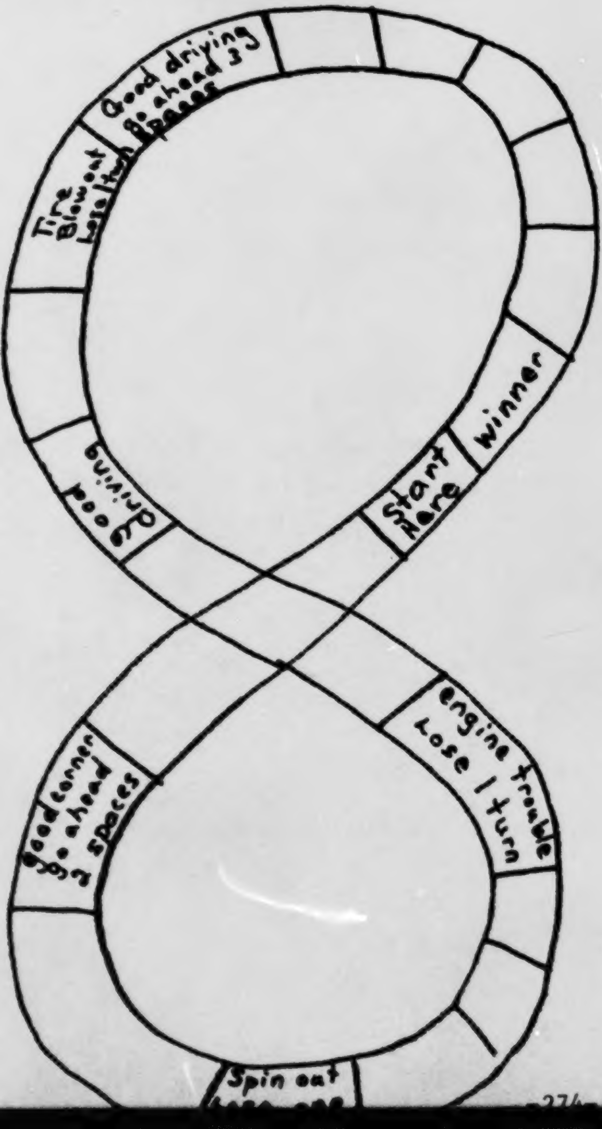
FIGURE 8 RACE

Materials:

- posterboard or cardboard
- toy cars
- 1 deck of problem cards
- number cube

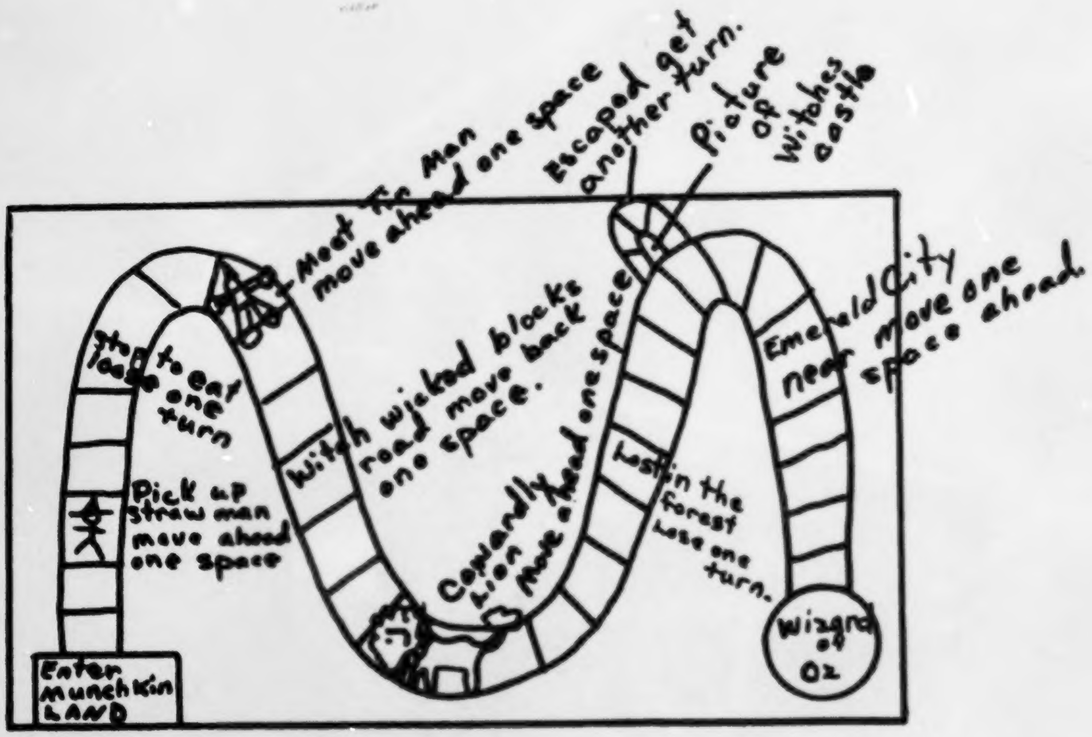
Procedure: Draw a figure 8 racing track and mark it off into sections which are large enough to hold the cars. In some sections, have instructions such as: good driving - go ahead 3 spaces; bad curve - move back 1 space, etc.

Instructions: Each child is required to select a problem card and answer the problem on it. If he answers the problem correctly, he rolls the number cube to determine how many spaces he may move on the board. He is unable to move on wrong answers. The first student to the space marked winner is the winner of the contest.


Good driving go ahead 3 spaces
Tire Blowout Lose 1 turn
Good driving
Start Here
winner
engine trouble Lose 1 turn
Good corner go ahead 3 spaces
Spin out

FOLLOW THE YELLOW BRICK ROAD

Materials:	Follow the construction directions for the basic step-a-set game board.
Procedure:	Label the beginning of the path MUNCHKIN LAND. Label the ending of the path THE WIZARD OF OZ. Randomly mark three spaces as Straw Man, Tin Man and Cowardly Lion. Randomly mark three additional spaces as Lost in Forest, Wicked Witch's Castle and Wicked Witch. Make one deck of problem cards (circle a small numeral in the upper right hand corner to show how many spaces the student may move for correct responses.
Instructions:	Each student selects a problem card. If the student answers the problem correctly he may move his character the number of spaces indicated by the circled number in the upper right hand corner of the card. If the child lands on the space marked Straw Man, Tin Man or Cowardly Lion, he may move forward one more space. If he lands on the space marked Lost in Forest, Wicked Witch's Castle, or Wicked Witch, he must move backwards one space. The first pupil to reach the Wizard of Oz space is the winner.

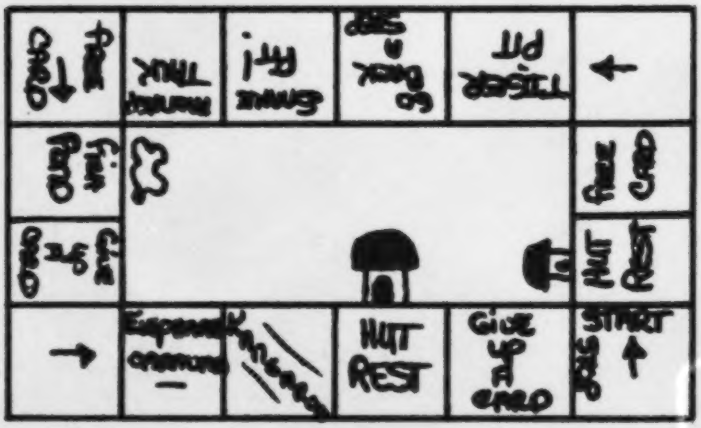

Meet Tin Man move ahead one space
Escaped get another turn.
Picture of Witches castle
Stop to eat loose one turn
Witch wicked blocks road move back one space.
Emerald City near move one space ahead.
Pick up straw man move ahead one space
Cowardly Lion move ahead one space
Lost in the forest lose one turn.
Enter munchkin LAND
Wizard of Oz

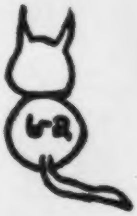
JUNGLE GAME

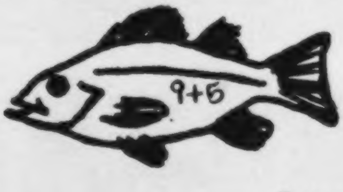
MATERIALS: One large piece of tagboard
construction paper animals (10 of each)
one number cube
markers

PROCEDURE: Take tagboard and mark into sections around outside, Label one section fish pond, another elephant caravan, another tiger pit, another monkey talk, another kangaroo. Fill in the remaining spaces with "Hut Rest", "Free card", "Go Back a Step", "Give up a Card", "Start, Stop". Put pockets on animal sections.

INSTRUCTIONS: Children roll the number cube to see how far to move. The children are to follow the directions on the space in which they land. If they land on a pocket with an animal they are to answer the problem printed on the animal. If they answer it correctly they get to keep that animal. The child with the most animals wins.


FREE CARD
MONKEY TALK
SNAKE Fun!
GO BACK A STEP
TIGER PIT
FISH POND
FREE CARD
GIVE UP CARD
HUT REST
Elephant caravan
Kangaroo
HUT REST
GIVE UP A CARD
START
STOP





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LADY BUG

Materials: Follow the construction directions for the basic step-a-set game board.

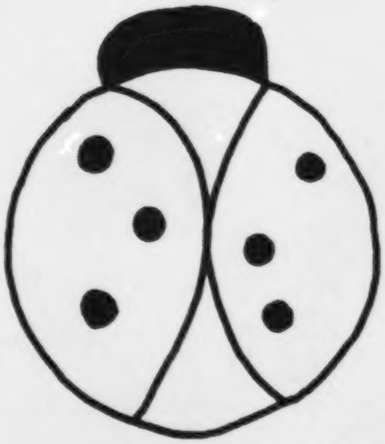
Procedure: The steps of the pathway are randomly decorated as flowers and lady bugs. The finish line is a house.

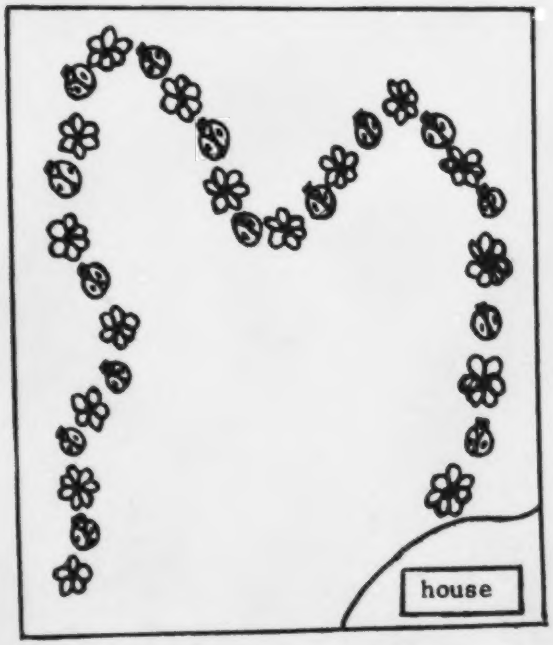
Instructions: Each pupil takes a turn rolling the number cube. He moves twice as many spaces as the cube indicates. (ie., If the cube shows 3--the playing piece is moved 6 spaces.)

If the playing piece lands on a ladybug, the pupil gets an extra turn. If it lands on a flower, he moves back one step.

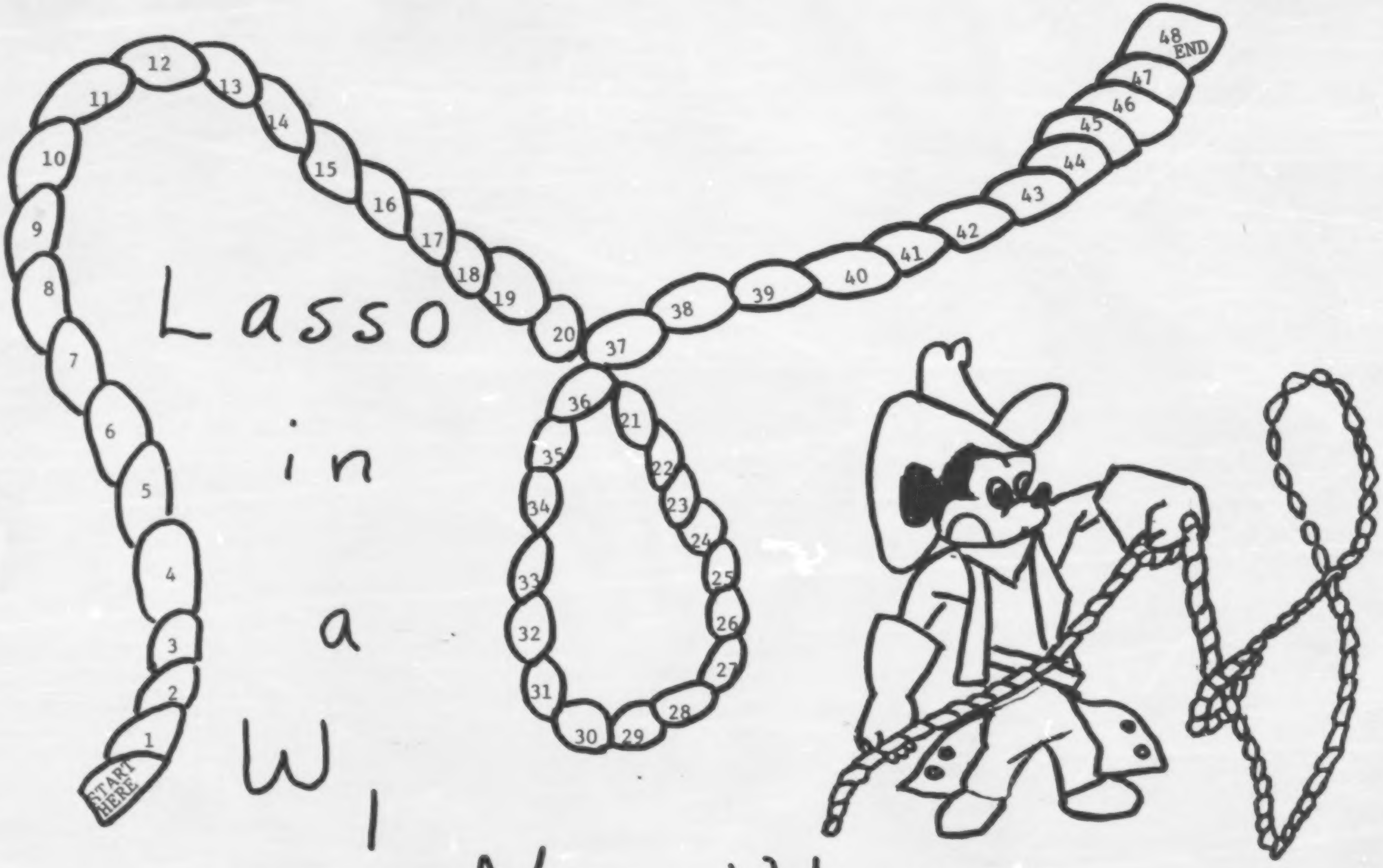
The winner is the first student to reach the finish (house).

NOTE! The game could be changed to moving three, four, five, etc. times the face value of the cube. You could also have decks of problem cards for the students to answer. One deck of lady bugs and one deck of flowers.





Lasso in a WIN with Mickey


START HERE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
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16
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19
20
21
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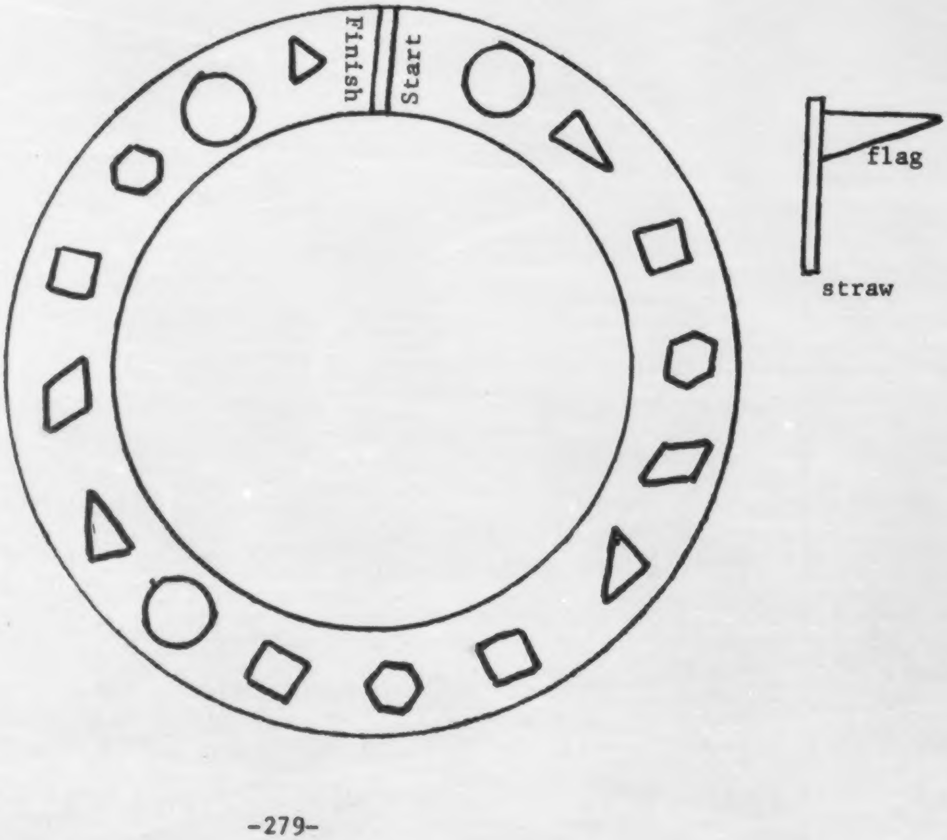
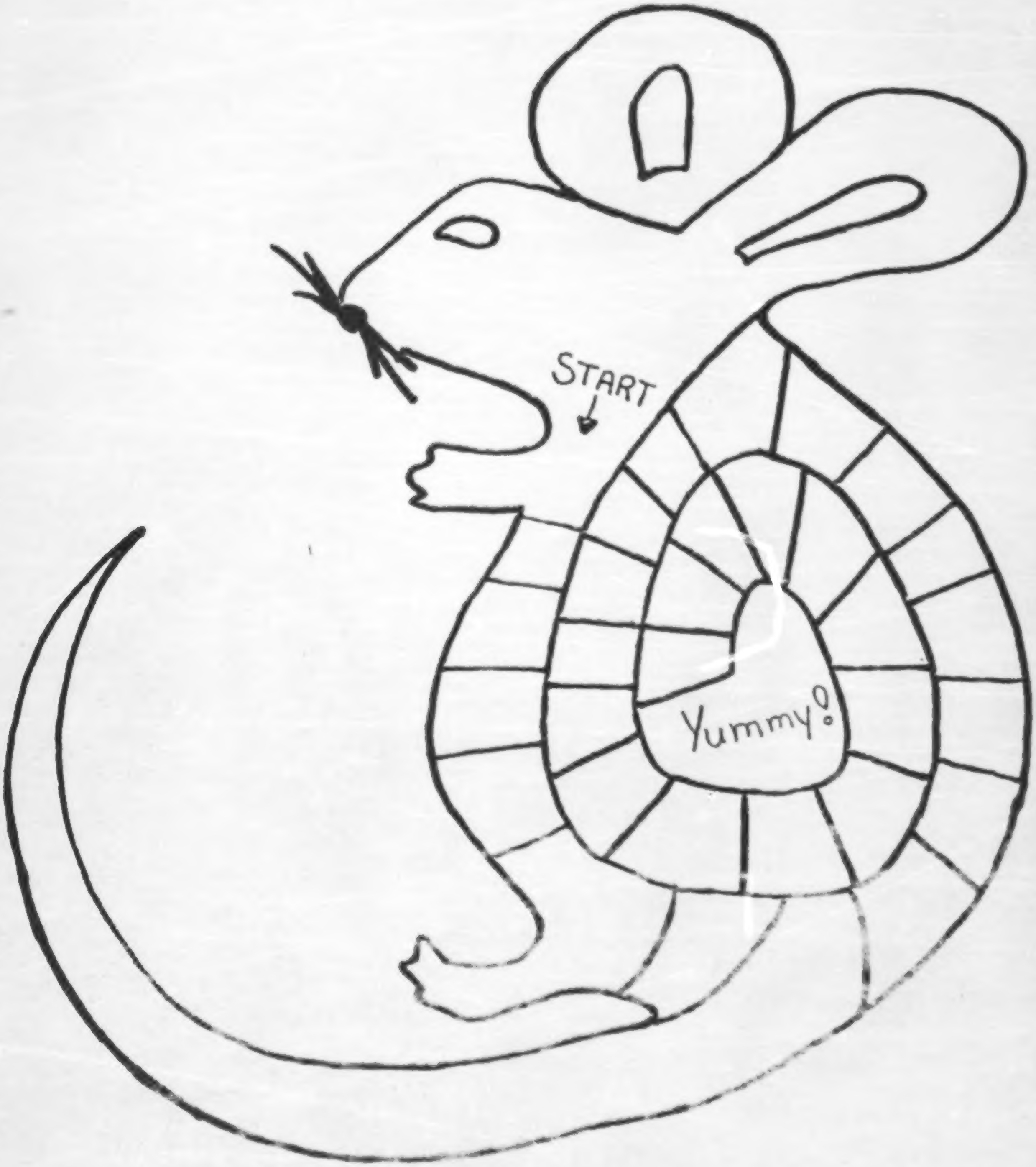
37
38
39
40
41
42
43
44
45
46
47
48 END

MOBILE RACE

Materials:	race car track (plastic, cardboard or styrofoam)
	colored paper - 2" x 2"
	straws - 4"
	6 small cars
	cubes (with sets or numerals)
	flags
	decks of cards
Procedure:	Race track is put together to form a circle. Starting gate is constructed out of straws and paper cut into flags. Every inch around the track is colored paper (shapes) glued on the track. Six different colors used and six decks of cards. Cards used in any concept needed. Color coded.



Mouse-O-Math

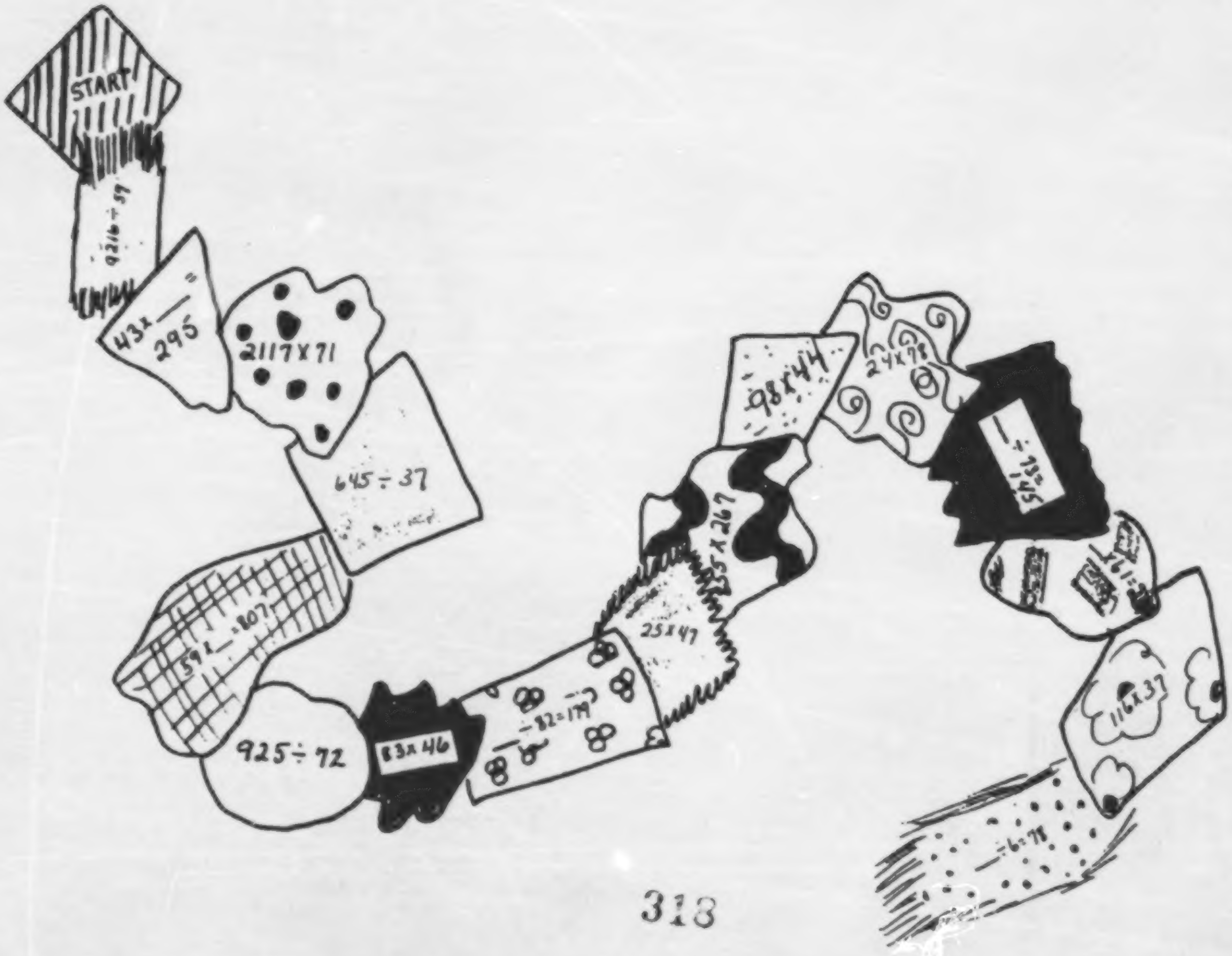

START
Yummy!

PATCHWORK SNAKE

Materials: Scraps of material
Playing pieces for participants

Prodedure: Form a snake shaped game board by putting pieces of material together.

You can write problems on the pieces of material or use a deck of problem cards for the students to answer.

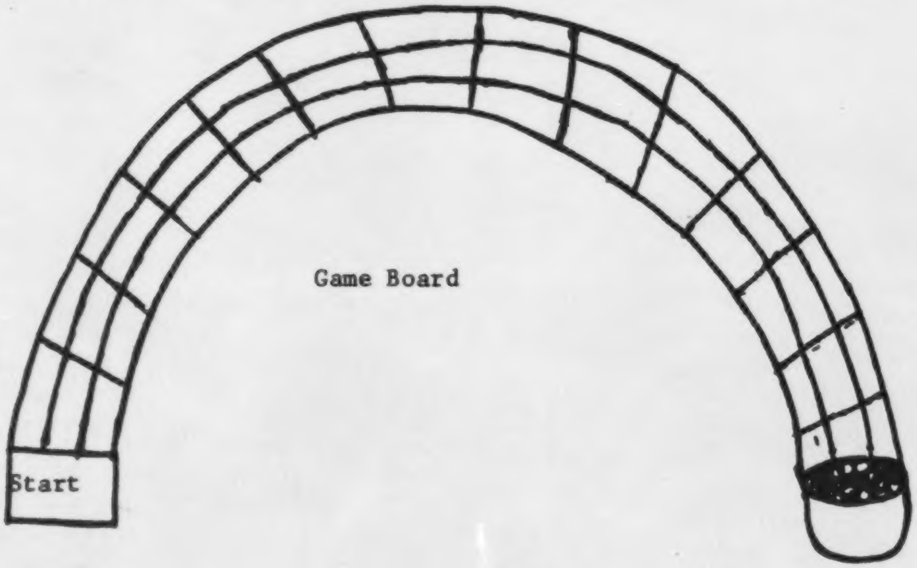

START
9216 ÷ 57
43x___ = 295
2117X71
645 ÷ 37
59x___ = 807
925 ÷ 72
83x46
___ ÷ 82 = 179
25x47
55x267
98x44
24x78
___ ÷ 73 = 145
___ ÷ 61 =
116x37
___ ÷ 78

POT OF GOLD

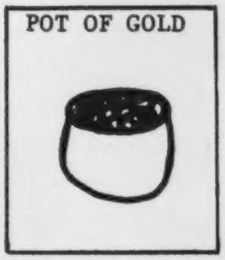
Materials: Follow the construction for the basic step-a-set game board.

Procedure: Lay out the pathway in the shape of a rainbow. See the illustration below. Prepare a deck of problem cards which have a small number in the upper right hand corner to indicate the number of spaces that a student may move along the pathway for each correct answer. Prepare a deck of "POT OF GOLD" cards. Each card should have a picture of a pot of gold on it.

Instructions: The player selects a problem card to answer. If he answers the problem correctly he moves the number of spaces indicated on the card and receives one of the "POT OF GOLD" cards. If he gives a wrong answer he must give up one of his "POT OF GOLD" cards. There will be two winners of the game, the first person to the end of the rainbow and the person having the most "POT OF GOLD" cards at the end of the contest.



Game Board



POT OF GOLD CARD

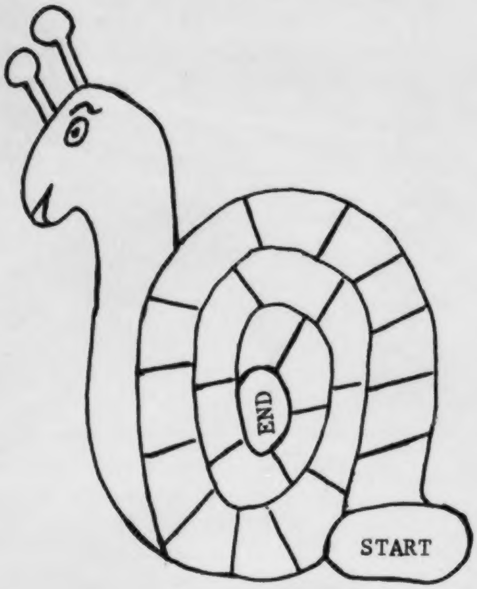
SNAIL-O-MATH

Materials:

22" x 28"
poster board or tagboard
2 cubes
2 - 4 playing pieces

Procedure:

A snail is drawn on the poster board. The body of the snail should be a spiral that is marked off into spaces.



Instructions:

1. Each player rolls the two cubes.
2. The child is to answer a problem from a problem deck. If he does so correctly, he may move the sum of the two cubes. If he does not tell the correct answer, he must move four spaces backwards.
3. The winner is the person who reaches the word "END" first.

SNOOPY

Materials: Follow the construction for the basic step-a-set game board,

Procedure: The following Snoopy parts are positioned randomly on the pathway:

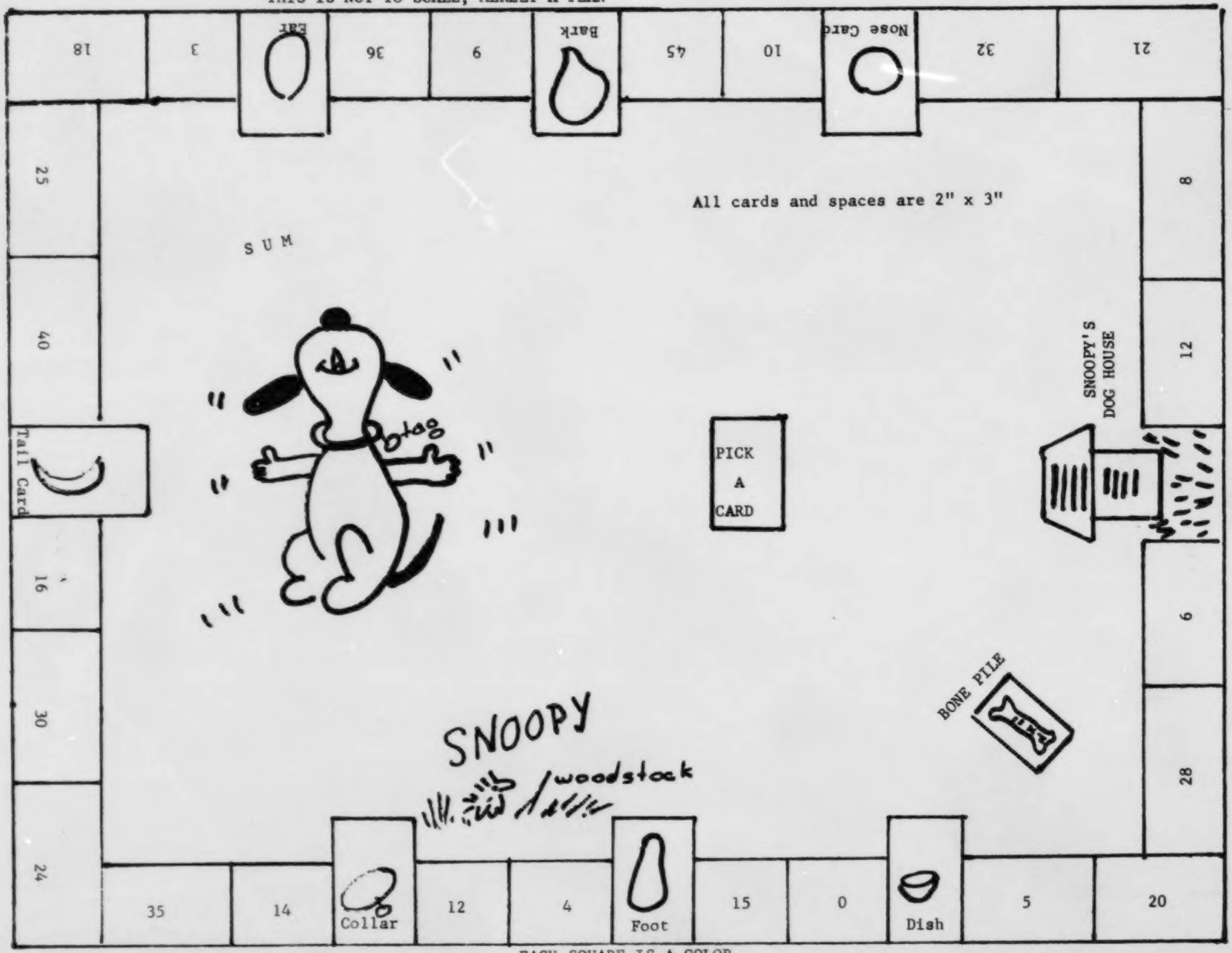
1. foot
2. nose
3. bark
4. collar
5. tail
6. ear
7. dish

Decks of problem cards are made for each of the 7 Snoopy parts. A deck of "Bone Cards" is placed on the playing board. The finish line is in the shape of a doghouse. The students rolls a number cube and moves that many spaces on the game board.

Instructions: If the student lands on a blank space, he takes a "Woodstock Rest" and does not have to answer any problem. If he lands on a Snoopy part, he must draw a card from that deck of problem cards. If he answers the problem correctly, he may keep that part of Snoopy. If he already has the part, he may choose a problem from the "Bone Pile." You may have three possible winners. The first person to the doghouse, the first person to complete Snoopy or the person at the end of the contest with the most bones.

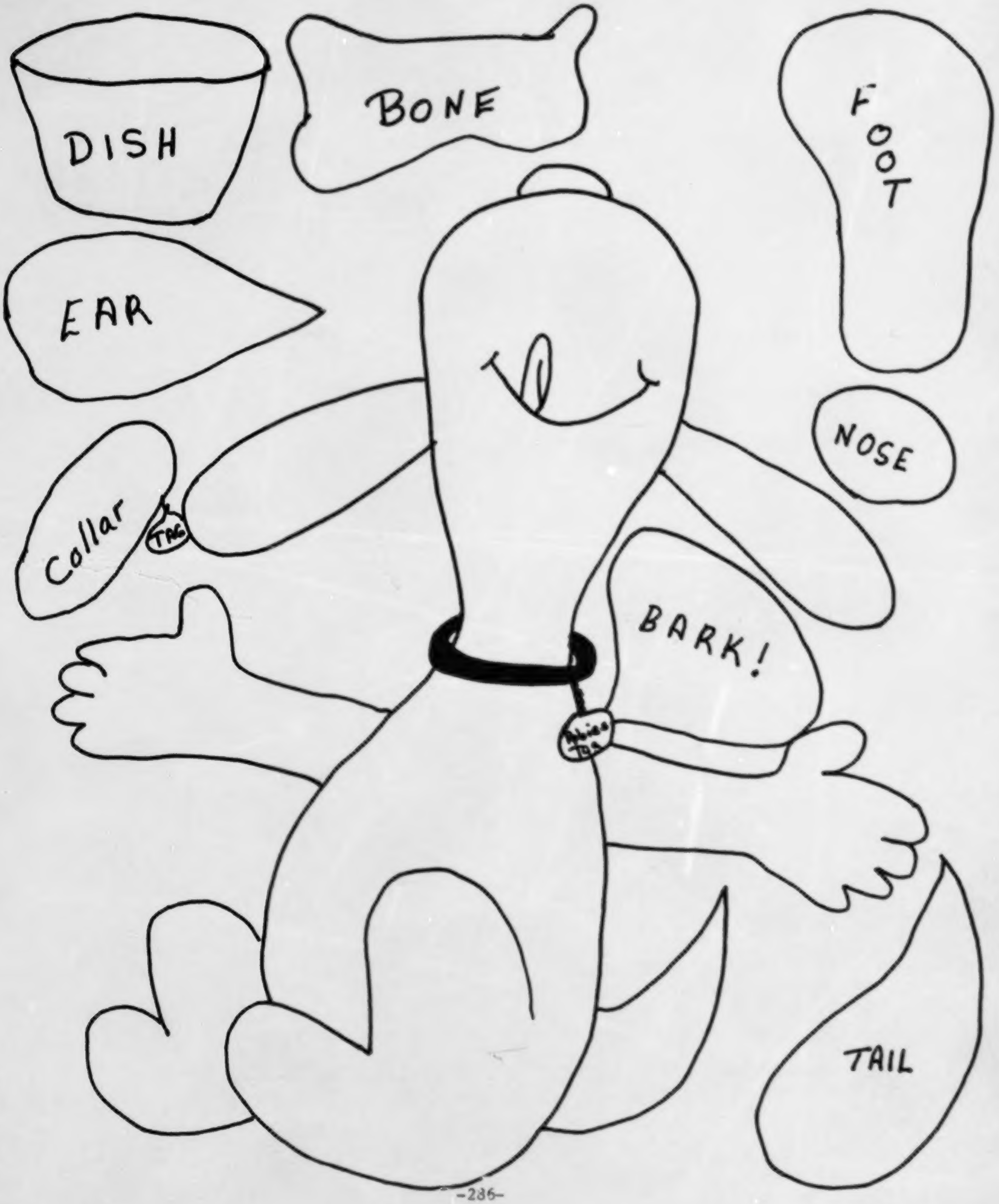
Variations: Use Witch, Turkey, Santa, Cupid, or Leprechaun body parts rather than Snoopy body parts for the different seasons of the year.

THIS IS NOT TO SCALE, MERELY A PLAN


18
3
Ear
36
9
Bark
45
10
Nose Card
32
21
25
SUM
40
Tail Card
16
30
24
tag
SNOOPY
woodstock
PICK A CARD
8
12
SNOOPY'S DOG HOUSE
6
BONE PILE
28
35
14
Collar
12
4
Foot
15
0
Dish
5
20

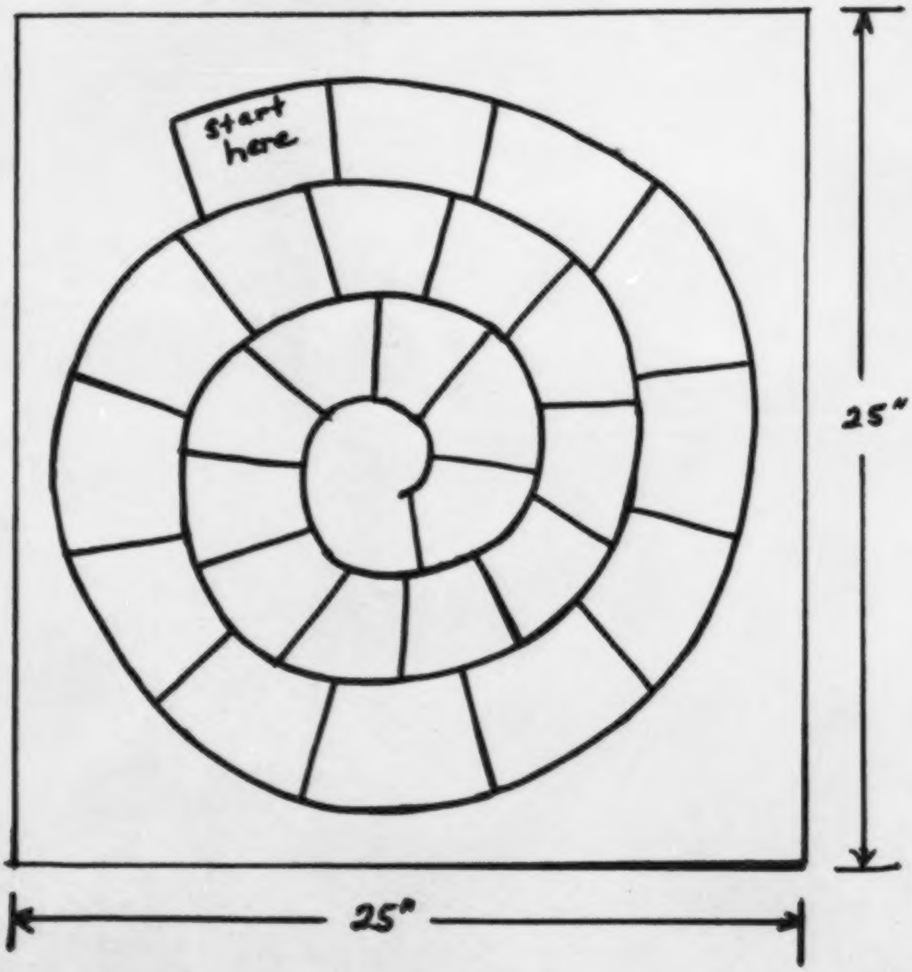
All cards and spaces are 2" x 3"

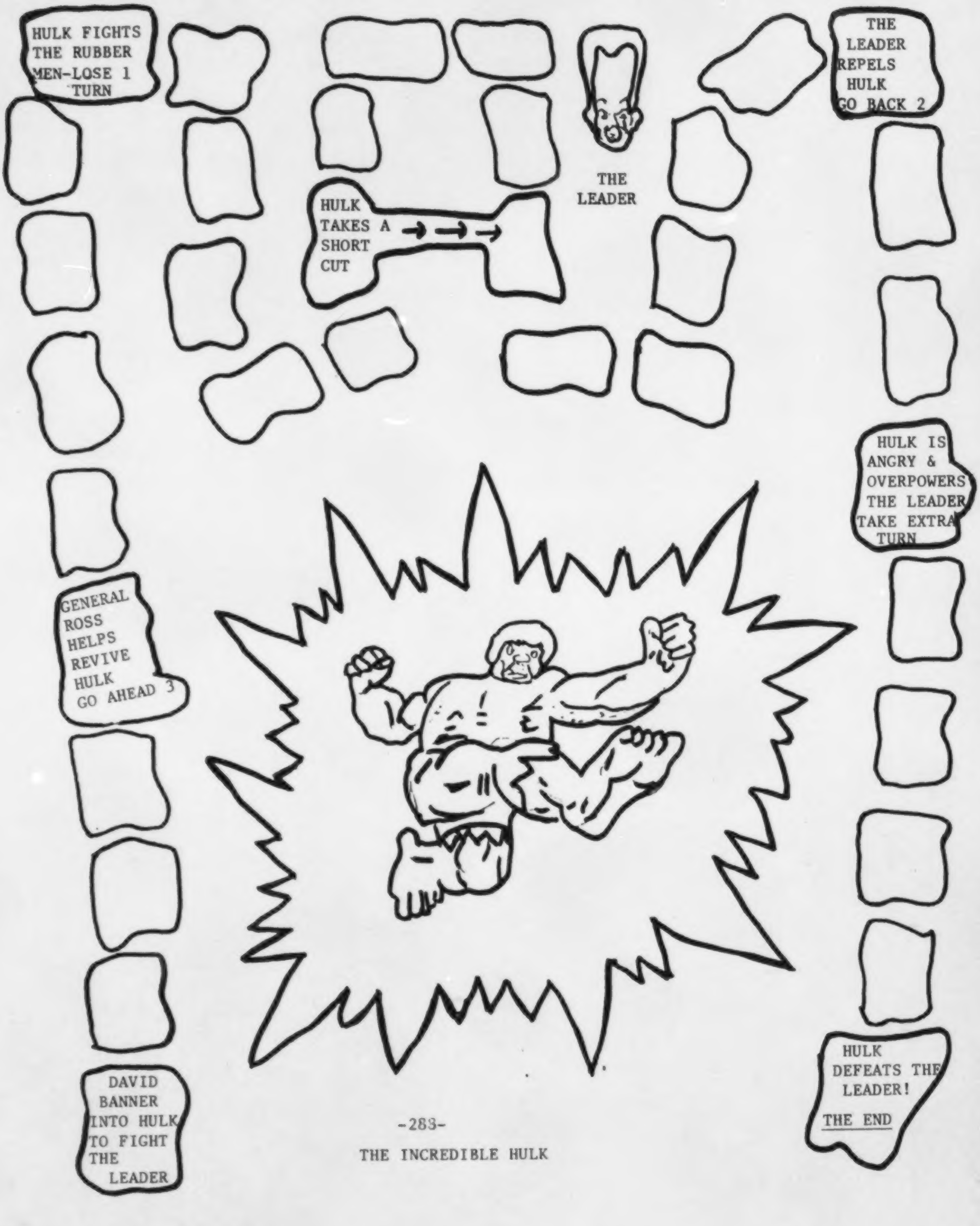
EACH SQUARE IS A COLOR


DISH
BONE
FOOT
EAR
NOSE
Collar
TAG
BARK!
Rabies Tag
TAIL

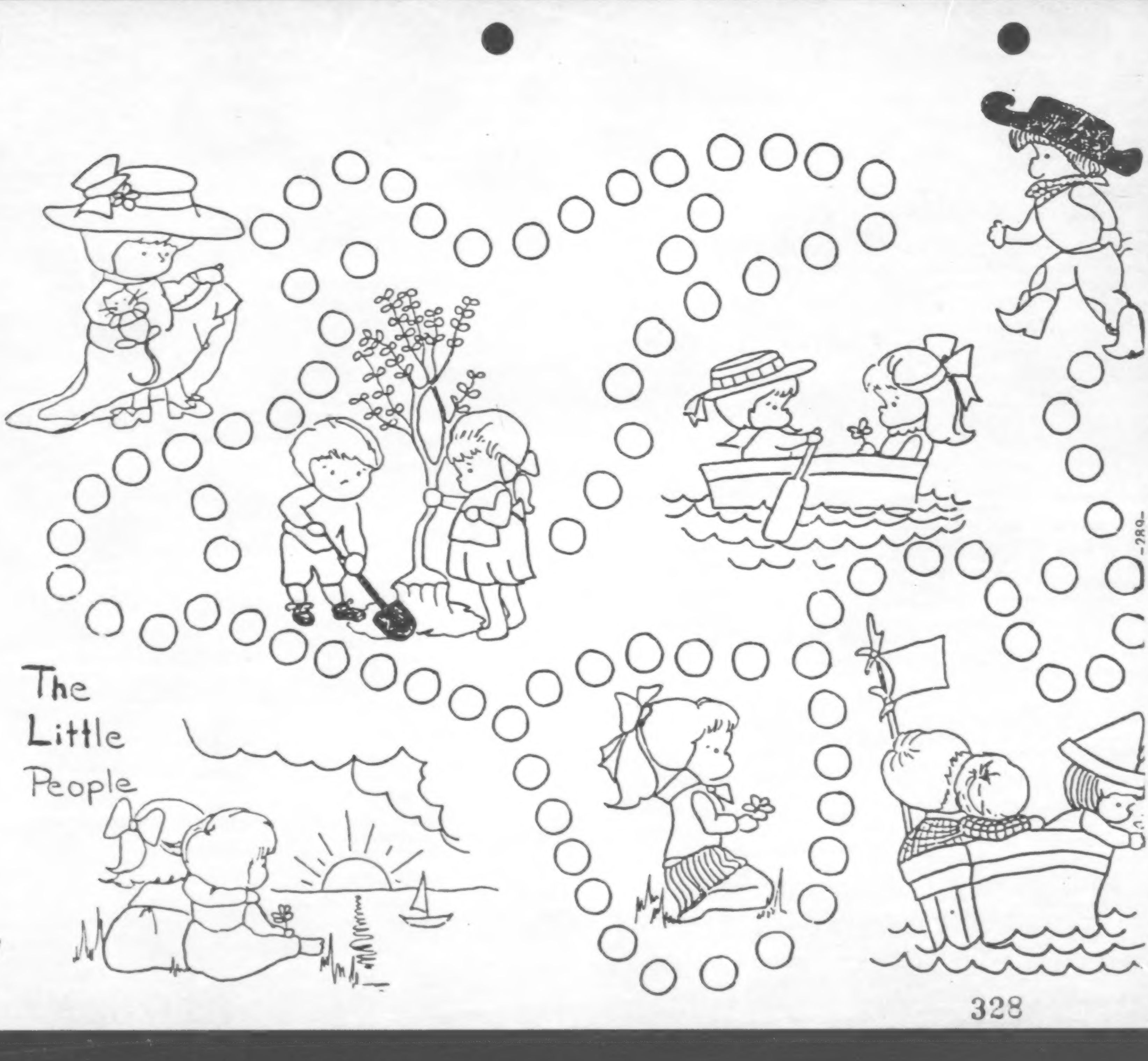
SPIRAL MATH GAME

Materials:	25" x 25" piece of styrofoam or posterboard
Procedure:	A spiral is drawn on the styrofoam (as shown in the following illustration). The spiral is marked off into units. Styrofoam objects, with pins glued to the bottom, can be constructed. This allows the styrofoam object to be stuck to the game board, or use movers.




HULK FIGHTS THE RUBBER MEN-LOSE 1 TURN
HULK TAKES A SHORT CUT
THE LEADER
THE LEADER REPELS HULK GO BACK 2
HULK IS ANGRY & OVERPOWERS THE LEADER TAKE EXTRA TURN
GENERAL ROSS HELPS REVIVE HULK GO AHEAD 3
DAVID BANNER INTO HULK TO FIGHT THE LEADER
HULK DEFEATS THE LEADER!
THE END

THE INCREDIBLE HULK



The Little People

TRIP TO HAPPY FACE

Materials: Follow the construction directions for the basic step-a-set game board.

Procedure: Arrange happy and sad faces randomly on the pathway. Prepare a deck of problem cards with a small numeral written in the upper right hand corner of each card to indicate the number of spaces the child may move along the pathway for correct responses.

Instructions: A correct answer entitles the pupil to move the indicated number of spaces. If he lands on a happy face he moves ahead two more spaces. If he lands on a sad face, he moves back two spaces. The first child to the large Happy Face at the finish line is the winner.